

APPALACHIA

DECEMBER 1961

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CHICAGO



A Volkswagen, obviously.

It's easy to spot a Volkswagen at any New England ski area.

Even with enough snow on it to hide the beetle shape.

It's the one that keeps moving.

Without chains and under full load, it trundles lightly over drifted back roads, nonchalantly mounts winding forest trails and negotiates difficult bottlenecks with agility.

A Volkswagen will even go up icy hills when other cars won't go at all.

The engine is in back, where it gives the rear wheels much better traction.

That's half the problem our New England winters pose. The other half is to keep the engine working.

So the VW engine is cooled with antifreeze, not water. There's no need for it to freeze, no chance of the block cracking.

You can park a VW outdoors in subzero weather or dig it out of a snow bank; it's ready to roll as soon as you turn the key.



Take a snow-free test drive and a test drive at your authorized Volkswagen dealer.

Established in 1930

ASA C. OSBORN CO.

Complete Outfitting



for the skier

Quality skis in a wide range of prices, including Head—Kastle—Dynamic—Roskopf—Northland—Goon.

Excellent selection of modern ski boots. Latest release and conventional bindings. Poles—waxes—plastics—accessories.

Clothing: Especially selected to the needs of every member of the family. Duofold—Brynje underwear.

for the camper

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GIFT CERTIFICATES

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Special \$25.95 Plastic, off-set edges.

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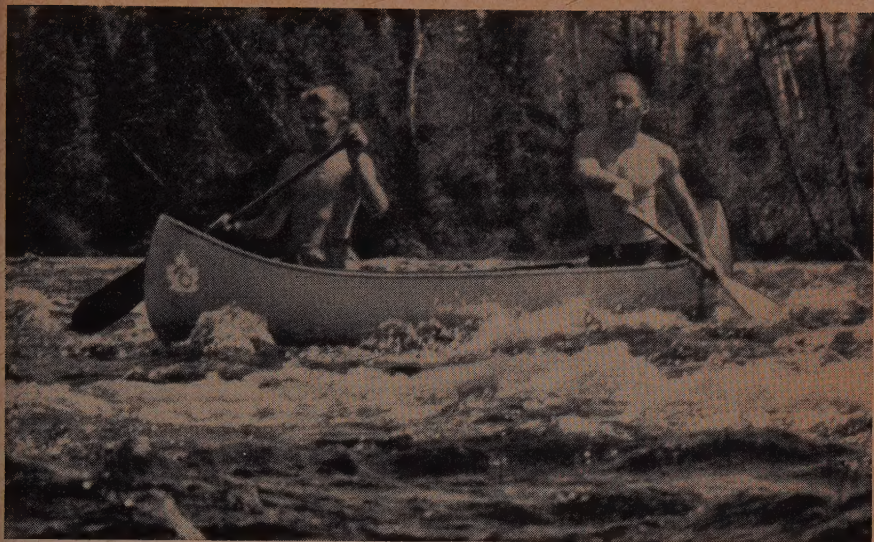
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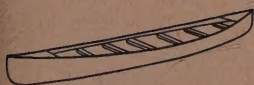
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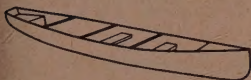
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Field Tested Equipment

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Pack Baskets—made of woven split oak—18" or 15" high. Imported Ruck Sacks with tubular steel spring frame.

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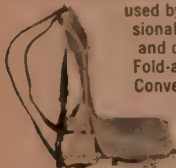


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"original"® Chippewa boots and shoes
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jiffy spray waterproofing
keeps delicate parkas, ski pants DRY
NO stains — NO stiffening — NO smell
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poles, clothing, etc. . . .

Rental equipment and storage

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—Combination hiking and climbing.

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Overlapping tube construction. 3-lbs. best grade down. 52" x 76". Adjustable draw string hood closing. Made of water-repellent Byrd Cloth with 38" zippered opening and closing seam, both fully weather sealed. Carrying case. Total weight, 5 1/4 lbs. Postpaid, \$49.50

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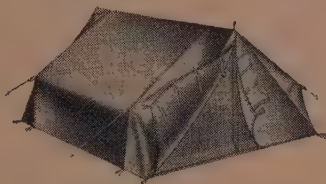
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SEE 4 FLOORS OF TENTS ALL SET UP!



- Light weight mountain tents in nylon or pima.
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ALL THIS AND MUCH MORE AT LOW OVERHEAD PRICES

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TOP SLEEPING BAG.

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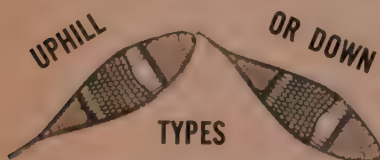
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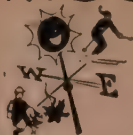
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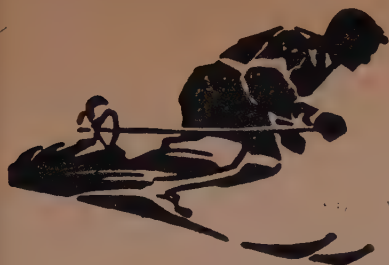
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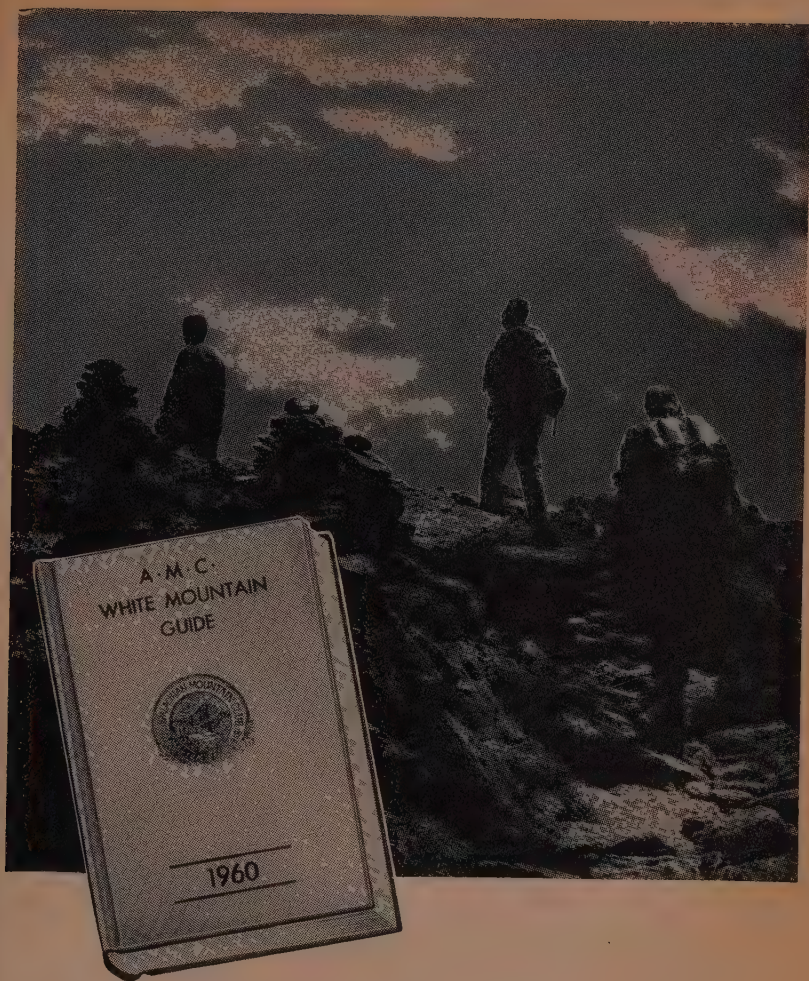
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New Series, Volume XXVII, December, 1961 Number 12

MAGAZINE NUMBER 133

APPALACHIAN MOUNTAIN CLUB

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APPALACHIA

DECEMBER 15, 1961

MAGAZINE NUMBER 133

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Erratum. The cover title for APPALACHIA of June 1961 should be
"Beaver Brook Falls".



THE ICE GOES OUT AT LAKES OF THE CLOUDS

June 17, 1961

Bradford F. Swan

TWO TALES OF THE PEMIGEWASSET

by SHERMAN ADAMS

NOW THIS IS THE STORY of the two-headed monster of Big Coolidge Mountain. It is told for the first time by the only living eyewitness and is important because it happened on Big Coolidge Mountain, for nothing important ever happened there before or since.

But before I describe the events surrounding this incredible episode, you shall first hear about the circumstances that once necessitated the use of zinc shears to get my trousers off. I am not at all sure that a tract of this kind belongs in such a proper publication as APPALACHIA. On the other hand it is doubtful if it could find any other suitable nesting place, and this is a saga that needs a home in a history book.

"The Hancock" is the parochial name long since given to an area of about eighteen thousand acres which drains into the Hancock Branch, which joins the East Branch of the Pemigewasset River four miles east of Lincoln just below the present highway bridge near the site of old Camp 4. This region was logged during the Spanish-American War and the decade following, after which it lay virtually unmolested for over thirty years, without road or habitation and with few trails. Trampers occasionally came in from East Pond or Greeley Notch but the old-time trappers and gum pickers had long ago given up the ghost.

One day in the winter of 1924-25 Harry Ronan, the manager of timberlands for the Parker Young Company, said to his 25-year-old assistant, "Why don't you take a look at the timber up in the Hancock and see if it is getting along toward pulpwood size? The Henrys¹ left a lot of small stuff that ought to be pretty good size by now."

SHERMAN ADAMS, a member of the Club, prior to becoming Congressman, Governor of New Hampshire, and Administrative Assistant to President Eisenhower, worked in the summer of 1920 on one of the earliest of the A.M.C. trail crews (see APPALACHIA, December 1957, pp. 540-2). And slightly before that, in the spring of 1920, he played an outstanding role in the record-walks contests of the Dartmouth Outing Club (see APPALACHIA, December 1932, pp. 261-278). On May 31, from midnight to midnight, Mr. Adams and William P. Fowler walked 83 miles to bring the most distant of the Outing Club's cabins, Skyline Farm in Littleton, "within a day's walk of Hanover". This walk, with its 5600 feet of climbing, and 6500 of descent, has stood as a record for mountainous road and trail-walking.

¹J. E. Henry and Sons, the predecessor company that owned the East Branch timberlands.

This was the kind of opportunity I never missed. I would push the Hancock frontier way back with a cruise and a report that would expose all the secrets of this remote fastness of the Pemigewasset wilderness. Furthermore, I would do it in one day! For my companion on this day of exploration I chose J. B. Teulon,² then a young office employee of the same company, in whose mind I succeeded in generating an insatiable curiosity about the mysteries of the Hancock. This would be no bird walk or casual meander; we would do a thorough job and we would do it the hard way.

Early in February we were ready. We took the 6.30 a.m. train at the Lincoln station and the Boston & Maine delivered us safely at Woodstock, where we made off with our snowshoes under our arms and our lunch in a light pack. The six miles up the bed of the old Woodstock Lumber Company's logging railroad was a pleasant after-breakfast warm-up. It had rained the previous day and the snow was hard and crusty. Our snowshoes rippled along the shadows of the brushy right-of-way. Overhead the sky was brilliant. A few juncos and a scurrying snowshoe rabbit were all that disturbed the complete tranquillity of the winter morning. The temperature had been gradually falling since yesterday's rain but there was no indication of any plummeting thermometer. It was a nice day and this trip would be a romp.

The climb up Osceola would have been easier if it hadn't previously rained. The Breadtray Ridge trail to the summit is only three miles or so, and there is nothing difficult about it. Only, it was slippery, and negotiating a sometimes steep and icy trail can take time. It was noon when we looked north into the valley of the Hancock. A brisk breeze was blowing, which gave us additional zest for the modest lunch we carried in the paper bags in our rucksack. Now we were ready to cruise the Hancock and had a whole afternoon before us to do it in. We reassured ourselves that the days were already getting longer and it would not be dark before six o'clock. Besides, it would be a bright night and I had spent many an evening on snowshoes in the woods. So it was clear sailing and nothing to worry about. After only nine miles we were well warmed up but still fresh as daisies.

Nobody who reads this has ever descended Osceola via the trackless north face in the winter right after a freezing rain. If anyone has, he should see his psychiatrist. The snow was hard enough so we could ride the tails of our snowshoes, but in thick second-growth spruce and fir that takes greater skill than doing a jump Christie on skis on one of the modern well-groomed

² J. B. Teulon survived this experience and now lives in Concord, New Hampshire, none the worse for wear.

slopes. We found that dodging the conifers on a 35-degree slope was really timber cruising by personal contact.

When the slopes became more gentle, we roamed around the upper reaches of the Hancock and came to the famous ox-bow where Henry Boyle finally got his train slowed down after the mile-long run-away this side of Camp 6. That was nearly twenty-five years before, about 1900, when the little Baldwin locomotive skidded and slid along the icy rails down the North Fork of the Hancock, with ten lengths of long logs behind and no brakes. Henry's brother Jack Boyle, the fireman, remembers it to this day.

We passed the site of Camp 5 and had a look at Pine Brook, where some of the residual stand, too small to cut in those days, was gradually coming to pulpwood size. But it did not take many miles of looking to decide that this country needed to be let alone for at least another twenty-five years. Even then it would still be pretty small, for our increment borer showed how slowly new growth was being added annually to the diameter of these 4-8" trees.

Our afternoon's work doubtless established an all-time record for cruising eighteen thousand acres of mountain timberland. It did not seem long before the afternoon sun began its descent behind Scar³ Ridge and the temperature descended with it. Darkness had seemed so remote early that afternoon. Now, all of a sudden the shadows were racing down the western slopes and the scuffy little clouds began to take on a rosy tinge. But it was only another eight miles or so to Lincoln, a hot bath and a good supper. So along down the old railroad bed we tripped on our snowshoes and came to the first crossing of the Hancock Branch, where an old trestle had long ago been swept away. Expecting to cross easily on the ice, a surprise awaited us. We had miscalculated, for the rains of yesterday had brought the water up so that part of the channel was covered with cold black water over the anchor ice. With some difficulty we managed to negotiate this crossing, and the next, but it slowed things up. Then it suddenly struck us that the East Branch crossing might be quite a different proposition. Dodging and detouring, it was about dark before we reached the site of the trestle at Camp 4, and we could hear the river roaring half a mile before we got there. I looked at the swirling current which had carried away the ice in the thread of the river, and made up my mind that we had quite a problem. Lincoln, the hot bath and a hearty supper were all on the other side of that stream.

Fording such a river in the summer against a six- or eight-mile

³ The old name, Scaur Ridge, should be restored.

current, when the water falls away under your armpits and pushes hard against your legs, is not easy. But in the starry darkness of a February evening, with a channel cut deep through river ice, such a crossing becomes even less inviting.

I offered Teulon a choice. We could probe the depths of the Pemigewasset or we could wait until somebody came along to build us a bridge. Since this might be some time in the indefinite future, my fellow-cruiser, with victories over a mountain and a wilderness under his belt, decided that he would rather go to the mat with the Pemigewasset. Besides, he wanted his supper.

As February nights go in this country, it was not particularly cold. The thermometer, as I later discovered, was about 10 degrees above zero, and we call this mild. By this time the stars were brilliant and there was no difficulty in distinguishing black from white. That was about all we wanted to see anyway.

Testing the ice toward the middle of the stream, we crept out to the brink of the channel, where I reached down with my snowshoe to try the depth and strength of the water. I decided it could be negotiated. I told Teulon to be of good cheer and follow me, and in I got. Here another surprise was in store for me, this time a pleasant one. I had expected that the water would be cold, and while it was, it did not feel cold after you got used to it. The water was warmer than the winter air and by contrast rather agreeable. Leaning upstream against the current on my long-tailed snowshoes I began to prowl around, feeling for footholds. The trick in fighting a current is to lean upstream against your prop and never lose your foothold. Foot by foot I measured my way across the thirty or forty feet of open water, with my companion gamely following me every inch of the way. Dropping downstream once or twice to avoid boulders, we reached the middle of the stream, with the water pushing at our midribs with persuasive force. But now we could begin to use the force of the current, that up to now we had had to fight, to help push ourselves toward the bank we needed to reach.

After what had seemed a long passage fraught with dire peril, I reached the brink of the opposite ice-field and, with an heroic hoist, pulled myself up out of the water onto the hard ice. When I had helped Teulon to make the same effort, we emerged from the Stygian stream unscathed.

Then a strange thing happened. Instantly our pants froze—not a casual, resilient, pliable freeze but a hard, belligerent, impervious, strait-jacket freeze. What kind of ordeal were we in for now? We had put sixteen miles behind us, and some of the going had not been exactly ideal. The railroad up the East Branch was now close beside us and Lincoln only four miles away. The cool bath in the river had been refreshing and we

eagerly set out along the well-plowed track for the still elusive hot bath and warm supper. From the waist to our feet we were now walking in a frozen icecake. Using the hips as a fulcrum, we discovered we could clomp along very well simply by leaning forward, lifting the leg, and allowing the law of gravity to pivot us forward. We soon found that the beat could be accelerated, and presently we were moving along at four or five miles an hour with the pulsating clomp-clomp sounding a strange and rhythmic cadence in the quiet of the night. The lights of Lincoln looked good. We clomped right down the streets of the town straight to our respective homes, a hot bath and supper.

Then another strange thing happened. I couldn't get my trousers off. But my wife, an increasingly resourceful woman, quickly unsnarled this problem. She got the zinc shears and ruthlessly slit the trousers right up the outsides of the legs, and all was well.

Now that is the story of how I had to resort to zinc shears to remove my pants, and it is time to tell you about the two-headed monster of Big Coolidge Mountain. Everybody who writes tales about the White Mountains will tell you about the strange and incredible events that have happened on Mt. Washington or Jefferson or Lafayette, or perhaps even on Mt. Carrigain. But who ever heard of anything happening on Big Coolidge? Nobody is downright sure where the mountain got its name, not even the august New Hampshire Historical Society, which is supposed to know everything about such things. I had always assumed the name came from some New Hampshire Zouave who fought in the Revolutionary War. But the Historical Society and I have many things to learn, among them that mountains are often named for little people that the Historical Society never heard of. The unvarnished truth is that the name came from a family who lived on the Pollard Farm sometime after 1800.

Lincoln was once described in one of the early gazetteers as a "rough, mountainous town inhabited by wild animals and largely unfit for human habitation". Into this town in 1892 moved J. E. Henry and Sons with a hayrack loaded with woods wangan, some of which was well upholstered with haywire. While considerable has already been written about that, not enough has been said about some of the people he brought with him. Along with them came the Boyles, Doyles and Dohertys who did a good deal of the work in the early days that put Lincoln in a clearing instead of in the woods where it had always been. These were remarkable people who paid little attention to a whistle or a time-clock and helped the Henrys to earn enough to buy the East Branch woodlands and pay their bills.

If only for sheer numbers, the Boyle family was the most

remarkable. There were seven boys and a girl, and their father was not Roaring Jim Boyle but another descendant of Saint Patrick, of the same name, who was born at St. Giles in Beauce County, Quebec. The boys did not need Roaring Jim to teach them how to be heard, for most of them learned well enough alone. Each was master of his trade—a walking boss or a woods foreman, a locomotive engineer or a fireman, a conductor or a yard foreman. They all were the tops in their profession and didn't have much patience with us young fellows. I never blamed them for that.

This story is about Billy Boyle, one of the seven, who could run a camp or an operation, or two of them for that matter, for he looked after the Beebe River camps as well as the Lincoln woods operation for a long time. He could roar loud enough in those days.

Along toward the end of the 30s we had an operation on Big Coolidge Mountain, one of the lesser Franconia Range mountains just back of Lincoln, which the old guidebooks list at 3314 feet elevation, as does the 1960 *A.M.C. Guide*, indicating that the mountain has not shrunk any in the last forty-five years. The Big Coolidge Camp was too close to Lincoln to preserve complete sobriety and decorum, but that couldn't be helped.

One Saturday afternoon in the late summer I started up Big Coolidge to look around a little, and about halfway up the mountain I met the walker, Billy Boyle, headed toward Lincoln with determination in his gait and fire in his eye.

"Where you going, Billy?" I inquired, with misgivings.

"I'm getting out of here," Billy shot back.

"What's wrong?" I asked.

"There's a monster up there." Billy's eyes were big as owls'.

"What's he look like?" I wanted to know.

"He's about five feet long, as big around as my two fists, with two heads and two feet forward and none behind," and Billy was gone down the mountain.

"Where is he?" I shouted down at him.

"Up back of Mike's crew," he replied, and that was all I could find out, for Billy was out of sight.

On I went and found old reliable Mike Wedriche and his partner chopping logs.

"Where's the monster that drove Billy out?" I asked Mike.

Mike pointed ominously up a little branch road where they had been working. A little way up the road I found it, the two-headed monster of Big Coolidge Mountain. There was a tremendous black snake, fully five feet long, which had swallowed an equally tremendous woods toad. But the toad was disappearing slowly, the hind feet already well surrounded by the snake

with the head of the toad staring out of the snake's mouth and the front feet still making contact with the ground. Billy Boyle hated snakes with a livid burning passion. And when he saw this two-headed phenomenon he fled and never returned to Big Coolidge Mountain until I assured him that the monster had been dispatched and that I would allow no such goings-on in the future.

But that was long ago and there may be more monsters on Big Coolidge Mountain. So far as I know, nobody has been up there since to see.⁴

⁴C. Francis Belcher, on a recent tramp through the Pemigewasset area with one of Billy Boyle's nephews, Francis Boyle, gathered the following item: Working out of Camp 21 in the summer of 1915, loggers found the bog areas around Shoal Pond infested with great numbers of large black snakes. From the moment of that discovery the foreman, Billy Boyle, became foreman in name only, refusing absolutely to set foot in the field.—ED.

NORTH TO CAMP 8

An Account of Recent Activities of the Juneau Icefield Research Program

by MAYNARD M. MILLER

IN THE NATIVE LEGENDS of the Alaskan Thlingits frequent mention is made of catastrophic glacier advances along the Panhandle's fiordal coast. Man's penchant for dramatizing and overelaborating such tales forces the scientist to view these references with suspicion. Nevertheless, one should remain alert to the possibility of a kernel of truth, for such can provide important clues to significant events of the distant past. Accounts of the flood of Genesis in the Old Testament, for example, may accord with geologic fact, since vast floods did occur at the end of the latest major phase of the Ice Age, the result of increased precipitation and excessive glacial melting in bordering highlands between 8,000 and 10,000 years ago. Correlative events are suggested not only in Mesopotamia and Egypt but in the local lore of tribes from the Indus River to the Cordilleran-headed valleys of coastal Peru and Alaska.

The legends from the Alaskan Panhandle first excited my imagination when I journeyed there twenty years ago. Recently these have come back to me as I have become increasingly involved in studies of the spectacular behavior of some of our North American glaciers. Several accounts told of sudden ice advances overriding native villages and filling in whole bays. But the most enigmatic was the legendary reference to "Taku", a Thlingit term loosely translated as "the place where the geese set down".

In southern Alaska today there is no specific locality distinguished by periodic visits of flocks of migrating geese. As I pondered the significance of the translation, I concluded that under present circumstances a direct meaning cannot be attached to "Taku", other than perhaps "great glacier", "mighty fiord", or the "roaring river" to which the name now specifically applies in the region of the Northern Boundary Range (*v. map*). Locally, the word connotes the fierce wind of early winter which drains seaward from the region of the great icefield sprawling along

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the crest of this range. The Indians gave this icefield a corollary name, Sith Klummu Gutta, "the Spirit's Home", a place they avoided and feared.

It was in 1940, during my first visit to the Taku district and the high Fairweather Mountains to the west, that I recognized the advantage of this icefield's accessibility and became intrigued by its paradox of simultaneously advancing and retreating glaciers. I decided then to start a program of glaciological studies on the Taku Glacier. Although the Second World War delayed the plan, I was able to return during the summers of 1946, 1947 and 1948 to develop this research. For want of a more practical name, in the resulting reports I called this the "Juneau Icefield", since its southernmost glaciers reach sea-level within a scant few miles of Alaska's capital city. The physical barrier which the icefield presented to the clamoring gold-seekers of 1898 forced them northward from Juneau along Lynn Canal to Skagway, and from there over the arduous crossing of Chilkoot Pass (*v. map*), before they could reach the goldfields of Atlin and the Klondike. Thus it was not until our explorations of the 1940s that penetration of the high interior of the Boundary Range was accomplished.

Upwards of 1500 square miles of inter-connected glaciers comprise the Juneau Icefield. These are born at elevations of 3000-8000 feet and extend for nearly 100 miles from the Taku River on the southeast to the Skagway River on the north. It is probably the fifth largest area of highland ice in North America. Through its investigation over the past two decades we have gathered information establishing beyond doubt that the legendary meaning of Taku is based on fact.

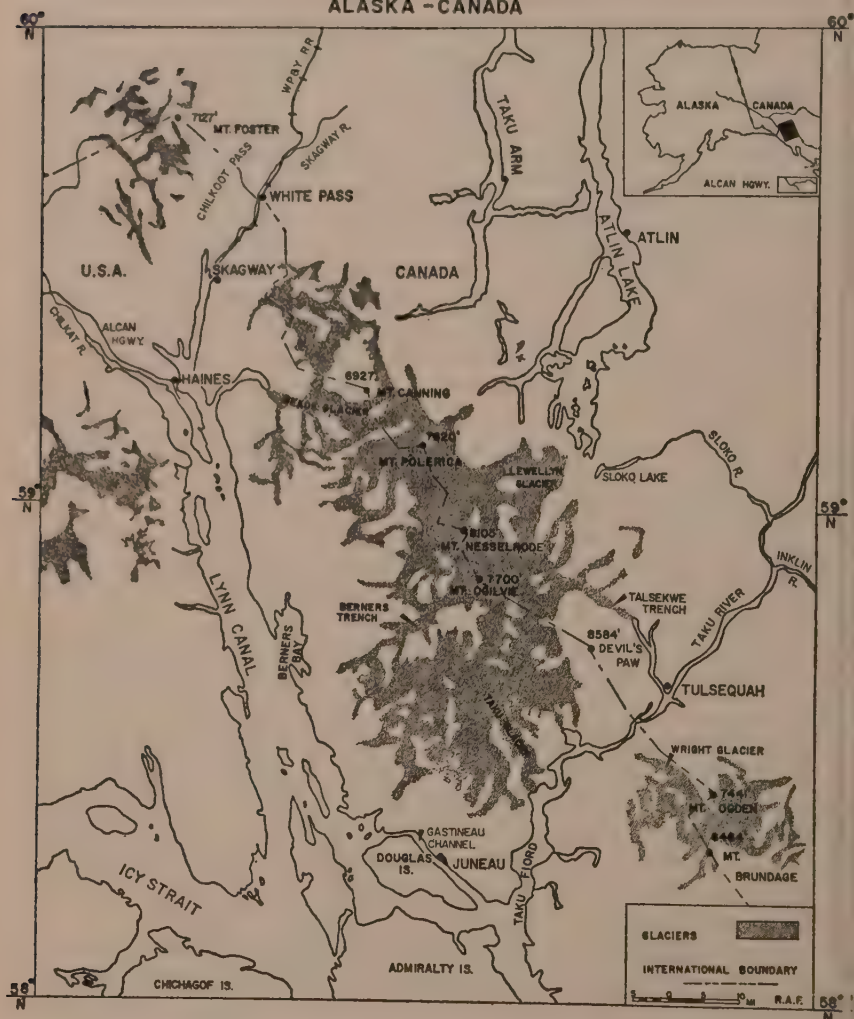
The geomorphological and glacio-botanical studies reveal that the Taku Glacier in past centuries was more expanded than at present and that on several occasions (the latest in the 1750s) its terminus advanced across the head of its fiord, causing an extensive lake to be impounded in the Taku River valley to the east. Telltale strand-lines of this lake have been found on the afforested flanks of the valley, proving that it once stretched for 20 miles inland across the border into the Tulsequah district of northern British Columbia. This ancient body of water was undoubtedly the legendary place where the geese set down.

This interpretation implies that the ice had advanced and retreated periodically during countless centuries of pre-history. The nature of this variation is much more complex than the latest crowding forward in the 18th century suggests. Search for the cause of these pulsations has formed a part of the work of the Juneau Icefield Research Program (JIRP as it is now familiarly known), a systematic long-range scientific program which this summer went into its 16th consecutive year.

The long-term aims of JIRP are many, but one of the most important is to keep a finger on the pulse of the glaciological changes. Glaciers are the most delicate recorders of climatic change and this particular icefield is one of the most climatolog-

THE NORTHERN BOUNDARY RANGE

ALASKA - CANADA



ically-sensitive on earth. Our findings already reveal that an extraordinarily complete autobiography of past climate has been written by these glaciers, especially regarding weather trends which have affected their state-of-health since the 1600s. On some of the glaciers emanating from the icefield as many as

twelve major fluctuations have been determined, covering the past 200 years alone. The studies also reveal current trends and augur success in developing a practical method of foretelling future glacial and climatological change.

A number of other basic investigations have been conducted. These involve the inter-related disciplines of glaciology, geomorphology, bedrock geology, geophysics, physics, meteorology, botany, bio-ecology, surveying and photogrammetry. The integrated nature of this work has been noted in previous articles in *APPALACHIA*, covering the nine expeditions between 1946 and 1953. The purpose of the present article is to bring the relationship up to date for the interval since 1954.

Aerial surveys of the sixteen key glaciers stemming from the southern half of the Juneau Icefield have been made at the end of each summer, with a renewed program of ground efforts taking place during and since 1958 (the International Geophysical Year). The sponsor of the program since 1952 has been the Foundation for Glacier Research, Inc. Additional aid has been provided by the U.S. Forest Service, the U.S. Weather Bureau, the U.S. Air Force, Columbia University, Michigan State University, the Explorers Club, and other governmental and industrial agencies. Radio liaison has been provided by the Federal Aviation Authority and the Juneau Squadron, Civil Air Patrol. During the IGY, a separate study was conducted by an independent group from the American Geographical Society, working on a small glacier in the vicinity of Juneau. Currently, in connection with the 1960-61 JIRP expeditions, a regional Alaskan glacier study is being carried out under contract with the National Geographic Society of Washington, D. C.

In mid-May, 1958, an early-season party of eleven men was flown to the icefield to begin the periodic observations at the main central camp (Camp 10, elev. 4000 ft.).¹ This is one of nineteen permanent and semi-permanent camps now established in the Taku sector of the Northern Boundary Range. The spring expedition was designed to take advantage of the full snow-cover, with a minimum of crevasses exposed. This not only facilitated delivery of equipment and supplies, but allowed the research team to obtain measurements of the late-spring accumulation budget (regimen studies) and to record the intensity of lingering subfreezing thermal conditions within the ice. By the

¹ Members of the 1958 spring expedition were: W. Boucher, oversnow vehicle mechanic, meteorologist; Dr. T. R. Haley, medical officer, in charge of logistics; P. S. Haley, in charge of food, field secretary; I. Herrigstad, communicator; Dr. M. M. Miller, Director, geologist; Dr. W. Nicholl, medical officer, camp manager; B. Prather, geophysicist, meteorologist; F. Schneider, field assistant; F. A. Small, glaciologist; M. Wien, ski-pilot; K. Loken, pilot, Juneau liaison.

second week of June, subsurface effects of the winter chill were dissipated in those sectors of the icefield below the 4500-foot level, so that isothermal conditions prevailed.

In this way the glacier warms up, or becomes "temperate" (i.e. 0°C. throughout), as opposed to the year-round sub-zero "polar" characteristics found in Antarctic and Greenland ice. With this condition reached, all surface melt-water ceased to be refrozen and a more general downward migration and runoff took place. In the higher reaches the glaciers remained chilled, and on fragmented surfaces of outcropping rock above 6000 feet permafrost conditions persisted at depth. The result was a recapture of all summer melt-water percolating to depth. Such data reveal the continuing net increase in accumulation over the high *névé* area on this icefield, as opposed to the equally striking net losses experienced in the glacier source areas at lower elevations. These observations are essential in the overall determination of the icefield's annual budget. Similarly, in 1958, early autumn observations were made on the cessation of melt-water activity with the commencement of the annual winter cold-wave. Thus a month of glaciological and related meteorological data were obtained at both the beginning and the end of summer.

During this work the expedition's Cessna 180 ski-wheeled plane, piloted by Merrill Wien of Fairbanks, made some fifty landings in support of the regimen studies and the research activities at Camp 10, Camp 15 (elev. 5000 ft.) and Camp 8 (elev. 7000 ft.). This last camp was supplied with new generator equipment, 50-gallon drums of gasoline, lumber and so forth, for the construction of a new high-altitude research observatory, started at this site in 1952-53. Two oversnow vehicles (M29C "weasels"), stored at Camp 10, were also put to good use in the scientific program on the lower Taku Glacier.

In charge of logistics was one of our two expedition medics, Dr. T. R. Haley from Tacoma, aided by Fred Small of Santa Monica. These two had been members of three previous JIRP expeditions, including the 1951 over-wintering party. The other medic, Dr. Willard Nicholl from Missoula, had also been a member of a previous JIRP expedition; while Irving Herrigstad, our radioman, had participated in two previous seasons of the program. An indispensable member of the team was Dr. Haley's wife, Peggy, who, although she had organized the food for the expedition, had not planned to be in the field. On a ski-plane flight to Camp 10 she volunteered as cook—and stayed on as a welcome addition, the first girl to become a full-fledged member of the team. Peg Haley brought a new spirit to the icefield, for between chores she had time to ski. Soon others realized what sweeping ski slopes there are in the central icefield area.



CAMP 10 (4,000 ft.) ON THE TAKU GLACIER

Photos courtesy Foundation for Glacier Research, Inc.

CAMP 8 (7,000 ft.) ON THE TAKU-LLEWELLYN NEVE





HELICOPTER LOGISTICS ON THE JUNEAU ICEFIELD

Photos courtesy Foundation for Glacier Research, Inc.

USAF C-123J SKI-EQUIPPED PLANE NEAR CAMP 8



About this time the bottom fell out of the scientific program for some three days with the arrival of another ardent skier, Lowell Thomas and his son, L. T., Jr. The Thomas party was making a TV film on Alaska and had asked to film our work. With them were the well-known Olympic skiers Don and Gretchen Fraser (the first American girl to win two Olympic gold medals); the skiing brothers Pepi and Franz Gabl (ski instructors at Mt. Hood and Grouse Mtn.) and the old master of narrative ski-movies, John Jay. The 100 pounds of tenderized steak which they brought with them added greatly to the occasion!

The highlight of their activity was the exploration of a 120-foot-deep crevasse with the TV camera, the results of which were later seen by some fifteen million TV viewers. It was a pleasant interlude under brilliant sunny skies, but for the sake of our scientific program we were relieved when the photographic entourage was evacuated amidst descending fog and storm.

Lowell later told me that because of their own tight schedule my account of a previous short-term visitor's problem had caused his party some anxiety. The story concerned Tony Thomas of the U.S. Forest Service, who had flown in for a few hours "just to unload the plane". Seventeen days later a wild storm abated sufficiently to allow him to begin the three-day ski out to Juneau!

The following autumn another month of icefield activity began. With a ten-man party I was flown to the icefield by the program's pilot, Ken Loken of Juneau.² In the ensuing few weeks Loken's Piper Cub, on skis, logged twenty landings under abnormally rugged conditions, since that late in the season an unusually rough surface had developed in the central camp area. For those maintaining Camp 8 on the crestral névé, 20 miles to the north, the conditions were better. There the first heavy snow of winter had fallen, making the ski landings contrastingly smooth.

At Camp 10 a well-engineered, switch-back trail was built, largely through the energy of Dave Potter. To cap this effort, Potter and Warren Clarke then back-packed a 500-pound engine up the trail, no mean feat since the block alone weighed 120 pounds. This engine was to serve as the main element of a rope-lift for hauling supply loads the 500 vertical feet to the station

² Members of the 1958-59 autumn-winter JIRP expedition were: W. Clarke, field leader, logistics; P. Farquhar, glaciologist; Dr. W. Hainsworth, adviser, meteorologist; I. Herrigstad, communicator; J. Jay, Jr., field assistant; Dr. M. M. Miller, Director, geologist; W. W. Miller, engineer, meteorologist; D. M. Potter, III, adviser; D. M. Potter, IV, glaciologist; B. Prather, geophysicist; K. Loken, ski-pilot, Juneau liaison.

from the landing site at the base of the nunatak. For a similar purpose a small tow, having a capacity of 100 pounds and using 1000 feet of line, was flown to Camp 8. In this way the tedious relay of essential supplies by back-packing could be minimized and time saved for scientific work. In the remote reaches of the Juneau Icefield the effects of automation have already been felt. But the icefield still throws its disagreeable punches when one least expects them.

In mid-September a buffeting blizzard enveloped Camp 8. The winds careened across the ridge, gusting over 100 miles an hour, forcing us to abandon much of the program and to take refuge in our tents. As the blizzard raged, Barry Prather, Peter Farquhar and I listened anxiously to radio warnings of the prolonged severity of the storm. When the tents began to rip under the barrage of wind, we hastily aligned the lumber and the gasoline drums into a solid barricade around the camp. Only with this makeshift protection were we able to sit out the nine days of lashing wind and driving snow on that exposed ridge. For one six-hour period we had to stand in the tent bracing the main pole against the blast. At this worst interval I could easily believe that part of the Thlingit legend which attributes the screaming wind to agonizing moans of the spirits. The conditions were as severe as any I have ever experienced, far worse even than the February storms of the JIRP 1951 winter expedition.

During a few hours' lull Loken was able to slip in to bring Dave Potter, Sr., and to evacuate Farquhar and Dr. Hainsworth, who were scheduled to return to Seattle. This transfer was barely accomplished before the skies were again obscured by falling snow. During the days that followed, Loken searched above the clouds in repeated attempts to reach us. Finally, after another week of storm, Prather and I took advantage of a raised ceiling to traverse the 20 miles to Camp 10. We skied at night on a cold powder surface and over the last half of the route beneath a cheerless moon. The sky was clear for only a brief twelve hours. At dawn, we climbed to the rock heights of Camp 10 to find that the others had been evacuated a few hours before. Then another wave of blizzard began to set in. Using the main camp radio, we quickly summoned Loken for our own retreat to civilization.

This season was reminiscent of the severe autumn conditions we had experienced in the high central sector of the icefield during October and November on the 1953 expedition. A review of the records corroborated our conclusion that these are the months of most violent storm and heaviest snow. In spite of these conditions, however, we had rounded out most of the scientific objectives of the season's program and had extended the observations well into the next accumulation year.

In 1960 we returned to complete the installations at Camp 8. With good reason we made sure that the cabins were well cabled to bedrock. Again an eleven-man field party worked out of the main stations for a full two months' period.³ Because of the success of Peg Haley's debut "on ice", my wife, Joan, joined us in the field as project secretary. Having been personnel director for a large market research company in New York before our marriage, she was a great asset as morale officer as well.

In this season a cooperative program was also initiated with an eight-man Japanese research group from the University of Hokkaido, whose efforts were concentrated on the Mendenhall Glacier, west of the Taku. This international experiment was preliminary to a correlated program being planned with these same scientists for the 1963 season.

The scientific program extended the basic surface regime and englacial measurements of previous years. It also repeated and enlarged upon some of the critical glacier-movement surveys for long-range comparisons. Synoptic meteorological records were obtained, for correlative purposes of the icefield study and for transmittal to the U.S. Weather Bureau station at Juneau for use in local and regional forecasts. The annual survey of frontal and névé-line fluctuations of the main outflowing glaciers was also repeated. The 1960 summer proved to be one of the most continuously wet on record. At Camp 8 the record from minimum-registering thermometers for the interval 1954-60 revealed winter temperatures to -87°F . The extreme thermal hostility of this location with respect to any future winter operations is important, but the special interest of this unexpectedly low temperature is its relation to the geophysical character of the icefield's extensive crestral névé. Another striking observation is that the zone of maximum snowfall has taken a strong downward dip during the last years of this decade. Coincident with this, we have noted a significant thickening of the ice on the Taku Glacier in the vicinity of the mean névé-line.⁴

Merrill Wien again flew support, making forty landings at the main and subsidiary camps. Helicopters were also used for the first time. The helicopter is well suited to icefield operations since its greatest safety lies when operating 500 feet or more

³ Members of the 1960 summer JIRP expedition were: Dr. M. M. Miller, Director, geologist; D. McLane, surveyor; D. Olson, meteorologist; D. M. Potter, IV, glaciologist, mechanic; B. Prather, geophysicist; J. Sawyer, asst. geologist, meteorologist; J. Horn, radioman; J. W. Miller, project secretary; Jack Miller, meteorologist; R. Warren, in charge of communications in Juneau; M. Wien, ski-plane pilot. Juneau liaison: D. Williams, E. L. Keithahn, T. Stewart and K. Loken.

⁴ The line of demarcation between the accumulator and dissipator zones; in this case at an elevation of approximately 3200 feet.

above the surface. This it can do almost continuously from most of the landing sites on nunataks at this or greater heights above the ice. By these means supplies were also delivered to a new location (Camp 9) at the 5000-foot level, 8 miles north of Camp 10, where a small adjunct station was under construction. Eventually, it is hoped that subsidiary stations may also be erected at Camps 14 and 15. These lie on the southwest and northwest branches of the Taku Glacier, at sites respectively 10 miles and 25 miles from the central icefield station. A small station is also planned for Camp 4 on the Twin Glacier névé 9 miles to the east. These will serve as periodic observation sites and route shelters for overland traverses to Juneau and the Taku valley.

In the 1960 season, as in previous years, the U.S. Air Force rendered special logistic support, bringing the number of icefield landings with ski-planes to more than 1500 in the past ten years. Another "first" was achieved when the Air National Guard's 144th Transport Squadron, under the aegis of the Alaskan Air Command, conducted a series of successful landings using the largest ski-aircraft ever to support expeditionary work on a North American glacier.⁵

The aircraft, a C-123J, was capable of transporting seven tons of supplies and equipment in a single flight. Jet pods on the wings provided supplemental thrust during take-off. Especially effective for the icefield operations was the unloading ramp on the tail gate, which is large enough to permit three-ton vehicles to be driven out onto the surface. The use of this aircraft alleviates the complications of air-dropping heavy equipment (as experienced in parachuting 5000-pound "weasels" to Camp 10 in an earlier year, *v.* APPALACHIA XXIX, 37-39). With this aircraft, heavy generators and bulky research instruments, fuel, lumber, metal sheeting, and other construction materials were easily delivered to the glacier camps.

The research station at Camp 8 was completed in the second week of August. This high-level observatory is probably unique in the world. It is situated on the critical upper névé at the very crest of the range, and within one mile of the International Boundary between Alaska and northern British Columbia (lat. 59°N.). From its 7000-foot vantage point atop a nunatak on the Taku-Llewellyn divide, about 6 miles southeast of Mt. Ogilvie,

⁵ Members of the supporting air crew for these missions were: Lt. Col. Whitney L. Morgan, Headquarters, Alaskan Air Command, Elmendorf Air Base; Major John W. Podraza, Commanding Officer, 144th Air Transport Squadron, Alaska Air Guard, Kulis Air National Guard Base, Anchorage; Lt. C. L. McKenzie, senior ski-plane pilot, Alaska Air Command; T/Sgt. Donald B. Kelley, crew chief, Alaska Air Guard; Donald Krull (civ.), Alaska Air Guard.

views of 100 miles or more are obtained in all directions. In addition to the program being carried out at this site, the camp also serves as a base for extending research into the high unexplored névés of the Meade Glacier in the Skagway sector to the north.

In this season another 8x12-foot structure was also erected at Camp 10, adding to the cluster of permanent buildings at the main southern field headquarters. Each is doubly insulated with fiberglass, covered with corrugated aluminum, and securely anchored to the granitic rock. Even in this inhospitable environment the installations should outlast a century of weathering. At the main stations an assembly of field instruments and scientific equipment was also installed in the 1960 season to insure the reliability of inter-camp communications.

But why should this field work and anticipated new explorations be continued in the Northern Boundary Range? Because tantalizing results have been obtained during the first fifteen years of record, and because the glaciers of the Juneau Icefield continue to unfold a significant story. The chain of camps is split between two distinctly separate névé-plateaux. The uppermost, with Camp 8 at its hub, nourishes the icefield's advancing glaciers (such as the Taku and the Hole-in-Wall); while the lower one, with Camp 10 at its center, is the key source area for those glaciers currently thinning and in retreat (such as the Mendenhall, Eagle and Twin). Our findings in this sensitive region have already revealed significant out-of-phase correlations between cyclic glacier variations of former years and the current trends on these separate plateaux. Further agreement is found with cycles of regional weather which have been plotted with data from sixty-four Weather Bureau stations on the adjoining shores of the Gulf of Alaska.

Most tantalizing, however, are our findings of strong relationship with recorded outbursts of solar radiation marked by increased solar flares, and even auroral displays in the ionosphere of our own earth. The tip-off is the amount of aurora. Periodic radiation changes in the sun appear to cause corresponding changes in temperature, precipitation and atmospheric pressure in the earth's atmosphere, which can be especially detected in the glacial ranges along this North Pacific coast. It can even be said that solar storms cause earth storms, hours or days later. Over the years the Juneau Icefield has locked up the effects of these storms in such a way that we can observe and study them in detail; for the changes, expressed by cyclic fluctuations in accumulation and ablation, affect the growth and decay of glaciers in this region over which the dominant storm tracks pass.

After nearly two decades of systematic field measurement in the Taku district we are coming out of the realm of speculation.

The cycles being investigated show that we are just at the end of a 45-year warm phase. By 1970 or 1974 not only coastal Alaska but all the northern part of the United States should be experiencing a return to the deep snow and lower temperatures of the 1880-1920 period. If the records of the Juneau Icefields are as indicative as we suspect, colder and snowier winters lie ahead.

Although conditions common a half-century ago can be expected to repeat themselves in the next two to three decades, the old-fashioned weather of grandfather's day will probably not reach quite the severity of pre-First World War days, since the long-range outlook, over the centuries, is for gradually increasing warmth. Certain observations and records currently being gathered by this program should firmly establish the relationships. What of the development of new trends? These too can be detected, but only through further years of periodic comparative measurement.

With such potential, the Juneau Icefield Research Program is being continued and the field facilities expanded in accordance with a definite long-range plan. The new stations which have already been constructed, and the additional research equipment delivered to the icefield by our recent expeditions, provide an exceptional advantage in this program of systematic study.

Since 1946 more than two hundred persons have been involved in the scientific work. The field parties have ranged from six to thirty-three persons, the larger numbers being in the 1949-51 period when the Office of Naval Research provided substantial support. With the improved and permanent facilities now available, it is possible to carry forward the research with smaller field teams, for shorter periods of time, and at less expense. It is, of course, desirable to have the record sites re-visited at least every two years. No matter how efficient these operations become, however, the measurements by bore-hole, test pit, and surface observation will continue to be demanding and tedious; and the need for trained and interested personnel and for adequate financial support will be ever-present.

Much has been learned to date, the essence of which is gradually being presented in separate scientific papers in professional journals and in reports of the Foundation for Glacier Research. But there is more research to be done. Of greatest interest is the inter-relationship between the physical, thermo-dynamic and atmospheric controls of individual glaciers and the remarkable changes in regimen currently taking place over the icefield as a whole. With the Alaska Road Commission's plans for a highway project in the Taku valley, through the area of the impounded lake where once "the geese set down", some of these investigations should have important practical meaning. It is

already gratifying that in the realm of detailed short-range prediction the studies are beginning to bear fruit. The results are also proving significant in the larger problem of the cause of Ice Ages.

Directly and indirectly such basic research should be of interest to earth-bound and space-borne humanity, since the Glacial Epoch is allied to the very origins of man. Man developed into an ingenious, enterprising creature during the waxing stages of the Pleistocene. He has spread his civilization across the deglaciaded landscape in the lingering shadow of the latest glacial retreat. Most certainly any major climatological reversals on our planet in the years and centuries ahead will be of vital concern. Man's ultimate survival may even depend upon an accurate scientific knowledge and full understanding of these cycles and trends.

MRS. ABRAHAM LINCOLN'S VISIT TO MOUNT WASHINGTON IN 1863

by JAMES DUANE SQUIRES

FROM THE VIEWPOINT OF HISTORICAL RESEARCH the problems involved in my topic have been numerous, interesting, and to some extent unsolvable. I have examined materials in more than a dozen places in New England, and in the Congressional Library in Washington. I could not locate a written record of the trip by any of the participants. Even such careful biographers as Carl Sandburg and Benjamin Thomas either ignore the matter entirely or refer to it only in the most casual way. The best secondary account is that by Ruth Painter Randall in her *Mary Lincoln: Biography of a Marriage*; but even this, as Mrs. Randall herself has written me, is far from complete. All that an investigator can do, therefore, is to piece together a number of tiny facts from all manner of sources, and to explore with diligence certain New England newspapers for the months of August and September, 1863.

The narrative of this journey of Mrs. Lincoln and her two sons to New England in 1863 is, however, a most interesting one, worthy of reconstruction in our own day. Let me suggest five reasons why. In the first place, it was the longest trip that Mrs. Lincoln ever took during her years in Washington. Second, it was one of those rare times when she was accompanied by her two sons. Third, the communications exchanged between President Lincoln and his wife while she was away testify convincingly to the warm affection and devotion which existed between them. Fourth, Mrs. Lincoln, while in New England, was in a rare and relaxed mood, perhaps the last time during the war that she exhibited her natural charm and happiness. She had emerged from the shroud of gloom which had covered her since Willie's death in 1862, and was not yet plunged into the new sorrows caused by the deaths of her favorite half-brother and her brother-in-law later in 1863. Finally, it was from this trip that Robert T. Lincoln developed his interest in Manchester, Vermont, which led to his retirement there many years later.

The origins of the journey, I think, are clear enough. As we all are aware, Abraham Lincoln and his family during the war years spent most of the summer months in the Anderson Building

JAMES DUANE SQUIRES is Chairman of the Department of Social Studies at Colby Junior College, New London, N. H. The present article is the major portion of a paper, originally entitled "Mrs. Abraham Lincoln's Visit to New England in 1863", which was read three years ago before the Lincoln Group of Boston, a society composed of fifty men and women from the six New England States. The portion here omitted, but summarized in a footnote, dealt with a further visit of Mrs. Lincoln to Manchester, Vt.

at the Soldiers' Home in the environs of the capital city. They had moved there on July 1, 1863. The next morning, as Mrs. Lincoln was driving into the city, she was thrown from her carriage. In addition to bruises, she suffered head injuries which, as it turned out, healed slowly. On July 3, the President telegraphed Robert, who was having his final examinations at Harvard, that his mother's accident was not serious. But eight days later he was disturbed about her, for on July 11 he telegraphed his eldest son, "Come to Washington". Three days later he wired again, "Why do I hear no more of you?" Robert was already nearing Washington, and later on the 14th he saw his parents.

This factor of Mrs. Lincoln's injury and slow recovery was the first reason for the trip that summer. Again, July and August in 1863 were excessively warm all along the Atlantic seaboard, and Mrs. Lincoln never thrived in the hot and humid weather of the capital city. In his recent book Stanley Kimmell comments on the sickening heat and dirt of Washington in the summer of 1863. No wonder the kindly and thoughtful President wished to speed his wife's convalescence by getting her away to a more agreeable climate in northern New England.

A third factor involved Robert T. Lincoln. As a freshman at Harvard, in October, 1860, Robert had visited the White Mountains and had deeply enjoyed the experience. He had been urging his mother to visit them ever since his own journey there. As Mrs. Elizabeth Grimsley's letters indicate, Mrs. Lincoln had been hoping to do this very thing ever since the spring of 1861. Moreover, Robert had just completed successfully his third year at Harvard College and would be twenty on August 1. What could be more natural for an affectionate mother like Mary Lincoln than to observe these two anniversaries by a trip with her sons?

One other aspect of Robert's relation to the trip was suggested by the astute John Hay in a memorandum to J. G. Nicolay, dated August 7, 1863:

Bob and his mother have gone to the white mountains. . . . Bob was so shattered by the wedding of the idol of us all, the bright particular *Teutonne*, that he rushed madly off to sympathize with nature in her sternest aspects. They will be gone some time. The newspapers say the Tycoon will join them after a while. If so, he does not know it.

It is a little surprising that the meticulous Hay failed to mention the fact that Tad Lincoln accompanied his mother and elder brother on this search for "nature in her sternest aspects".

Mrs. Lincoln and Tad were in New York by Tuesday, July 28, for the President telegraphed them there that Robert would join them the next day. Presumably the family group went to Boston on Thursday, July 30. This was Mrs. Lincoln's third trip to the capital city of Massachusetts since she had become the First Lady. She had been there on a two-day visit in May, 1861, with

Mrs. Grimsley, and again for a longer stay in November, 1862. She invariably stayed at the Revere House, a hotel not now in existence, but which then stood in Bowdoin Square on a site now occupied by a municipal fire station.

The Boston *Daily Journal* on the very day that Mrs. Lincoln and her sons arrived in that city, *i.e.*, on July 30, put this headline on a news despatch: "President Lincoln to Visit New England". The source for this incorrect statement was an unnamed Washington correspondent. The next day the *Journal* amplified its original report to read as follows:

Mr. Lincoln contemplates making a short visit to the New England States during August, if his official duties will permit. He is sadly in need of a little relaxation. He will avoid all the fashionable places, and proceed quietly to the White Mountains, where he will meet Mrs. Lincoln and his eldest son.

Again, it is to be noted that there is no mention of Tad's presence in the party.

By Saturday, August 1, 1863, the Manchester *Daily Mirror* in New Hampshire had the story with some further embellishments:

Mr. Lincoln contemplates making a short visit to the New England States during August, if his official duties will permit. He is sadly in need of a little relaxation. He will avoid all the fashionable places and proceed quietly to the White Mountains, and meet Mrs. Lincoln and his eldest son. The President will decline all receptions and ovations, but will go as a quiet citizen on a health-seeking tour.

Supplementing this, the New Hampshire *Patriot*, a newspaper not in sympathy with the national administration, at Concord rather sourly observed on Wednesday, August 5:

FATHER ABRAHAM COMING. It is stated that the President is coming to the White Mountains to cool off and rest. The Boston *Post* says he couldn't do better, and that the country can get along even if he is perched on the top of Mount Washington.

Governor Joseph Gilmore of New Hampshire was a man well acquainted with what today we would call "public relations", and he read his papers carefully. On Tuesday, August 4, he wrote the President:

I see from the public prints that you are intending to spend a few weeks among the Mountains of New Hampshire. May we not have the privilege of welcoming you to our state capital? . . . I have no desire to subject you to . . . speeches or parading you over our dusty streets in the broiling sun. But if you were to let me know . . . a day or two before your arrival that you would spend a night at least in my house, the people . . . would give you a spontaneous and informal ovation which would do your soul good.

To this friendly letter the President replied on Friday, August 7, as follows:

My dear Governor Gilmore: I thank you very heartily for your kind invitation to visit Concord and especially for the exceedingly cordial terms in which you have conveyed it. I very much regret that I cannot at present accept it. I am by no means certain that I can leave Washington at all this summer. *The exacting nature of my official duties renders it exceedingly improbable.* I assure you, however, that I am none the less sincerely grateful for your kind intentions and for the expressions of personal good will contained in your letter. I am very truly yours,

A. LINCOLN

While this high-level correspondence was going forward, Mrs. Lincoln and her two sons left Boston on Saturday, August 1, and journeyed by rail to Alton Bay, New Hampshire. From that point they took a steamer across Lake Winnepesaukee to Center Harbor on the northwest shore. This was the regular tourist entryway to the White Mountains in those years, traveled by thousands each season. Mrs. Lincoln and her sons, according to the *Manchester Daily Mirror*, spent Sunday, August 2, in Center Harbor. From that point on Monday the third they "staged it to Conway, where gentlemen from Boston put their private carriages at her disposal".

In a special despatch to the *Boston Daily Journal*, published on August 8, but dated Tuesday, August 4 at the Kearsarge House in North Conway, that paper's New Hampshire correspondent wrote:

Mrs. Abraham Lincoln and her two sons arrived here last evening from Center Harbor. Their party will leave here tomorrow morning for the Glen House and Tip Top House, Mount Washington, in a handsome "turnout" which has been especially detailed for their accommodation with an old and popular driver in charge. They will visit all points of interest en route. While at North Conway Mrs. Lincoln and family have been very courteously entertained at the Kearsarge House; gentlemen from Boston having their carriages with them have put them at the disposal of the Presidential party.

Mrs. Lincoln has expressed herself more than delighted with the elegant and unobtrusive attention which the guests at North Conway have given her.

The weather is beautiful and the company unusually large all through the mountains.

The Mt. Washington Carriage Road, at that time the only method of riding up New Hampshire's loftiest peak, began at a point close to the Glen House and ran upwards along the east face of the mountain. It had been authorized by the State Legislature of 1853, but had not been finished and opened for traffic until August, 1861. It had proved to be a great tourist attraction and, now in its third season, was heavily patronized. On Thursday, August 6, Mrs. Lincoln and Robert joined the throng of tourists and drove to the Tip Top House. The *Boston Daily Journal* correspondent in his despatch dated August 7—which he headed "Thanksgiving Day on Mt. Washington"—wrote as follows:

Yesterday . . . one hundred and thirty visitors came to "Tip top" and in the crowd came Mrs. A. Lincoln and her son Robert. . . . Mrs. Lincoln is a lady of medium size rather round favored and quite fleshy. She was dressed in a dark riding habit, dark bonnet and veil. She has a very fair, cheerful, smiling face, which does one good to look upon. She is quite light complexioned, has blue eyes and dark auburn hair, and on the whole, as might be expected of a President's wife, has a very agreeable way. Her son Robert is a dark complexioned lad of some sixteen years. . . .

Today Mrs. Lincoln came up again from "The Glen".

On this second visit Mrs. Lincoln delighted the Boston journalist by asking him to take down the mountain for immediate mailing to Washington a letter from herself to the President. What a pity that this letter has not survived!

The despatch to the Boston *Daily Journal* which has just been quoted is worthy of note for at least three reasons. First, it is one of the few complimentary descriptions of Mrs. Lincoln penned by a newspaperman after her crushing grief in her son Willie's death. No doubt its kind words about the First Lady reflected her true feelings that summer's day on top of Mt. Washington; certainly at that moment the horror of war and the tensions of the capital city seemed far away indeed. Second, this despatch correctly notes that the President's Thanksgiving Day proclamation, dated July 15, 1863, but set for Thursday, August 6, was generally observed throughout the North. Third, the journalist gave a succinct description of Robert T. Lincoln, although he grossly underestimated the young man's age. Actually, Robert was not sixteen, but had just passed twenty.

Although this particular correspondent failed to mention Tad Lincoln, the writer for the Manchester (N. H.) *Daily Mirror* was more explicit. In the issue of that paper for August 8, the following comment appears:

Mrs. Abraham Lincoln and her two sons, Robert and Thomas, the latter about ten years old, are creating quite a sensation in the mountain region.

Knowing the high spirits of the younger boy, we may surmise that it was he rather than his more dignified older brother who was creating the sensation.

It was while his family was in the White Mountains that the President on Saturday, August 8, wrote his charming and often-quoted letter to his wife, summing up the weekly grist of news from Washington, and containing the well-known line: "Tell dear Tad that poor 'Nanny Goat' is lost, and Mrs. Cuthbert and I are in distress about it." This delightful letter is reproduced in full in Stefan Lorant's new book, *Lincoln: A Picture Story of his Life*.

Just how and when the Presidential family left the White

Mountains I have not been able to ascertain. They were still there as late as Tuesday, August 11. But on Thursday they were en route to Boston. The Manchester *Daily Mirror* in its issue for Friday, the 14th, stated that "Mrs. Lincoln and her two sons passed through here yesterday afternoon on their way home from the Mountains, and stopped at the Revere House in Boston last night." On the same day, Friday the 14th, the Boston *Daily Journal* reported that "Mrs. Lincoln and her two sons are at the Revere House on their return from the White Mountains". A similar item appeared in the Boston *Evening Transcript* for the 14th, and on the 15th the Boston *Evening Traveller* noted that the President's wife and her two sons had spent the morning on a steamboat excursion in Boston harbor.¹

Mrs. Lincoln never forgot her pleasure in seeing the White Mountains in August, 1863. Sixteen years later, in 1879, when she was far removed from her days as First Lady in much anguish of spirit, she yet found the time and energy to write a long letter to her grandnephew, Lewis Baker. In this missive she urged him to take a vacation in New England, and especially to visit the Tip Top House on Mt. Washington. So strongly did she wish him to do this that she offered to pay his vacation expenses for four weeks. It is proof of her happy memories of her own trip there in 1863 that Mrs. Lincoln recalled the exact name of the hotel on the mountain summit.

This trip, which I have tried to describe for the reasons given in the introduction, will always remain of deep interest to students of the Lincoln family. Aside from the wives of our presidents who came from New England, Mrs. Lincoln, I believe, was the first First Lady to make an extended visit to this region. For that reason alone, if for no other, we are happy in the memory that hotels in three New England states nearly one hundred years ago carried on their guest registers the names: Mary Todd Lincoln, Robert Todd Lincoln, Thomas Lincoln.

¹ From Boston the party moved to New York, where Mrs. Lincoln remained for some days, the boys probably returning to Washington. On August 24, again accompanied by Robert, she journeyed to Manchester, Vt., for a two weeks' stay. After returning again to New York she received in quick succession three telegrams from the President, dated respectively September 20, 21 and 22, urging her to return. On September 24 the President wrote, telling her of the terrible battle of Chickamauga and the death there of her Confederate brother-in-law, Ben Hardin Helm. It appears that she went home at once after receiving this communication. She had been away almost two months.

QUERY BY AUTHOR: Does any reader know of the existence of any picture relating to this trip?

THE SHAPE OF NEW ENGLAND MOUNTAINS

by WILL F. THOMPSON

PART III

Introduction

LOCAL GLACIERS, now vanished, have contributed a regionally characteristic and especially scenic element to the New England mountain landscape. We have seen in Part II of this study that the alpine uplands of the Presidentials and Katahdin are stripped of most of their snow each winter by great gales; long streamers of that snow are carried across the sky to leeward (eastward) day after day. In Part II analysis of field and photo-interpretive evidence showed the character and dominant role of mass wasting on New England mountains. The effects of removal and redistribution of snow, when combined with other elements of the regional climate, effectively differentiate the mass wasting processes, and therefore the topography, of alpine and subalpine slopes variously windswept or sheltered. Continental glaciation interrupted normal processes; but, though it made no contribution to the wind-controlled differentiation of slopes, it did not obscure it much either. This section will first discuss the effects of local glaciers, some of which have been active under climatic conditions only slightly more severe than those of today. Because such glaciers were fed by drifted snow, their position and vigor were largely controlled by the alpine westerlies and thus contributed to the wind-controlled slope differentiation. We will then sum up the study by briefly re-evaluating the geographic significance, discussed in Part I, of the unity thus imposed on New England mountain landscapes by climate.

New England glacial cirques are all located where blown snow has at some time accumulated readily and been naturally conserved. Even now a great deal of snow is first deposited around the rims and high on the headwalls of the higher and more sharply-cut cirques, and then descends into them as avalanches. Such cirques, and Tuckerman Ravine in particular, thus accumulate great masses of snow each year at the base of their headwalls. Glaciers have consequently formed in a number of such sites even since the last recession of continental ice. On the other

Parts I and II of this article appeared in *APPALACHIA* for December 1960 and June 1961.

Thanks are due to the late Dr. R. J. Lougee, who saw this study through its early stages, and to Dr. J. Hoover Mackin, who read and criticized much of the text of this paper. My son Rusty (William Thompson III) was field assistant throughout the study. Space prevents acknowledgement of help by many others.—AUTHOR'S NOTE.

hand, there are a number of cirques in New England which are not so located as to have had local glaciers recently. They appear to be of various ages; the oldest examples are hard to distinguish from similar basins formed entirely by stream action at points where stream-cut gorges converge. Most of our attention will be directed to the higher, more recently active cirques in New England.

Recently-glaciated cirques characteristically line the lee margin of graded summit surfaces of the Flattop type in the Rockies (pp. 150-151, Part I), just as they do those of the very similar New England alpine uplands. Such a relationship is presumably common also in the mid-latitude continental mountain climates of central Asia and perhaps maritime Siberia. The characteristic topographic situation of such drift-oriented cirques contrasts sharply with that normal in the much less continental climates of the Alps and most of our Pacific Coast ranges. Cirque glaciers in ranges like the Alps are characteristically fed by avalanching of snow storm-deposited on the faces of sharpened ridges immediately above them, rather than by snow drifted from graded uplands to windward.

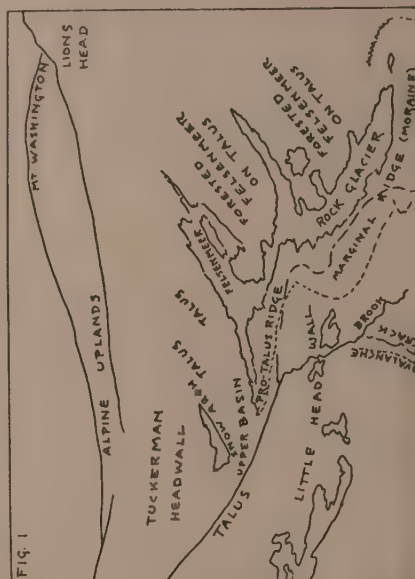
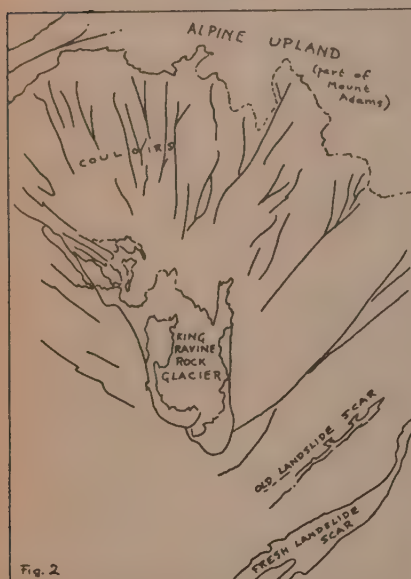
The Character of New England Cirques: Tuckerman Ravine as an Example

The size and shape of New England cirques, and conditions in and around them, are so varied that it will be convenient to discuss Tuckerman Ravine first (Fig. 1), because it is especially well known, and then use it as a standard of comparison in dealing with other cirques in the region. Part II noted that Tuckerman has not yet eroded headward into the side of the summit cone of Mt. Washington, but instead lies entirely below the level of adjacent lawn surfaces, which have low gradients and in the vicinity of the Ravine do not rise much above timberline. Some New England cirques have eroded headward into higher alpine surfaces, so that the upper part of their headwalls is definitely above timberline. In no case, however, is the floor of a New England cirque either truly alpine in character or accordant with the alpine uplands in the vicinity, as cirque floors commonly are in many other mountain regions.

In Figure 1, Part I, the head of Tuckerman Ravine appears as a great trench just to the right (east) of the summit cone of Mt. Washington. The westerly winds carry snow to it from west to east across the alpine upland illustrated, which is roughly a square mile in area. Different parts contribute snow according to wind direction. Because winter winds practically always blow toward Tuckerman from one part or another of the upland, it probably has a steadier supply of snow in season than any other New England cirque. Some of the drifted snow falls directly into

the Ravine or avalanches while still a loose powder. Much of it consolidates into brittle windslabs (Seligman, 1936) just above the rim of the Ravine. The settling of underlying snow places the slabs under stress, so that they are easily broken up by shocks such as are produced by atmospheric turbulence in the lee of the summit cone. They then descend the headwall as avalanches.

The Tuckerman avalanches carry down with them many stones from the ravine rim, mostly felsenmeer boulders which have crept into vulnerable positions. Fragments of such stones are numerous on the ledges of the lower part of the headwall in summer, precariously perched where they have melted out of the avalanche accumulation. In 1939 R. P. Goldthwait misinterpreted as roches moutonnées certain ledges of Tuckerman head-



wall which have been rounded and striated by the stone-laden snow torrents. On the strength of his contention that the striations are evidence of continental rather than local glaciation (they are neither), the condition of those ledges has been accepted by many students as confirmation of J. W. Goldthwait's conclusion (1913) that there have been no post-continental glaciers in the Presidentials.

The elder Goldthwait's position in the matter was originally based on the absence in Presidential cirques and glacial troughs of moraines comparable to those formed in such sites by mountain glaciers in western Europe. That deficiency will be explained on other grounds later, and post-continental local glaciers will be shown to have existed in many New England cirques.



Will F. Thompson

Fig. 1. TUCKERMAN RAVINE, MOUNT WASHINGTON
(See diagram opposite)

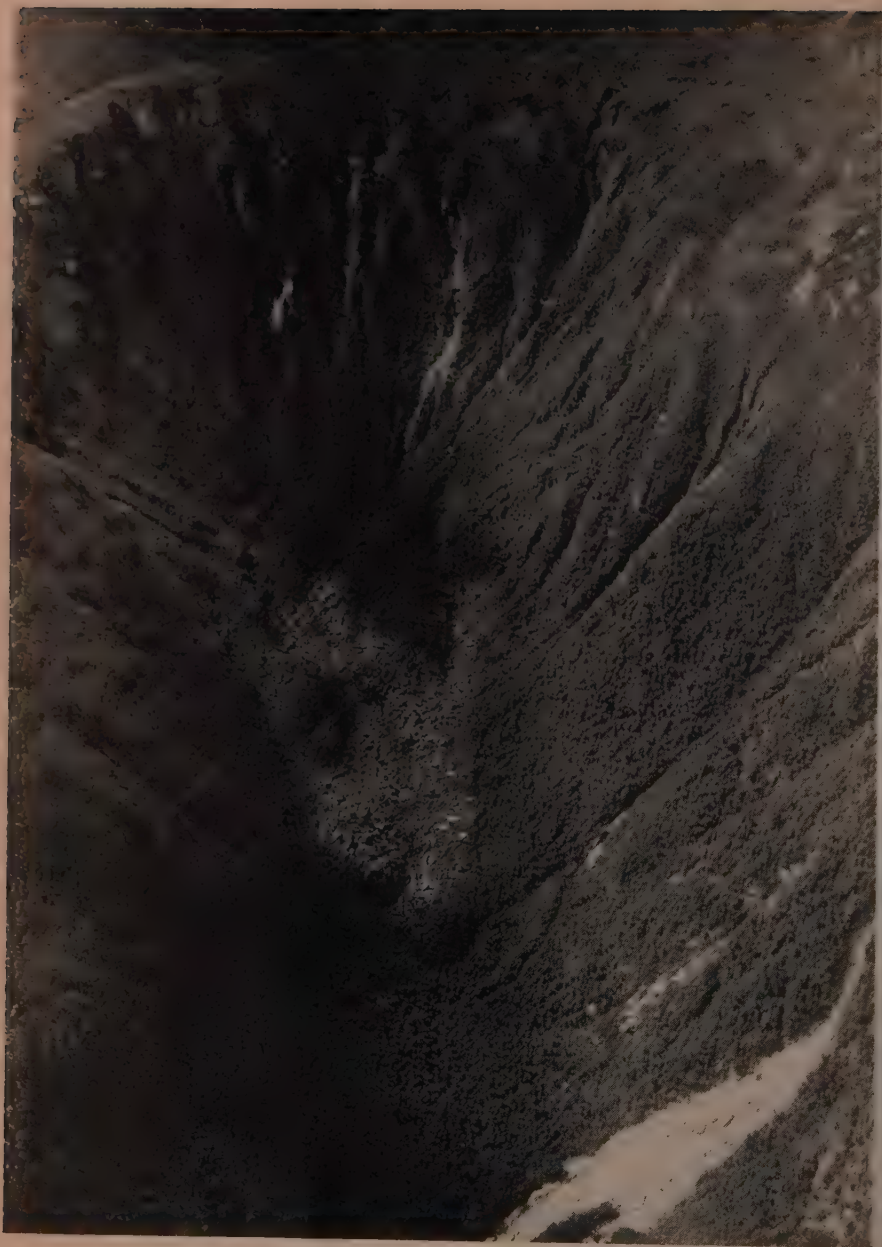


Fig. 2. KING RAVINE, MOUNT ADAMS

(See diagram, p. 460)

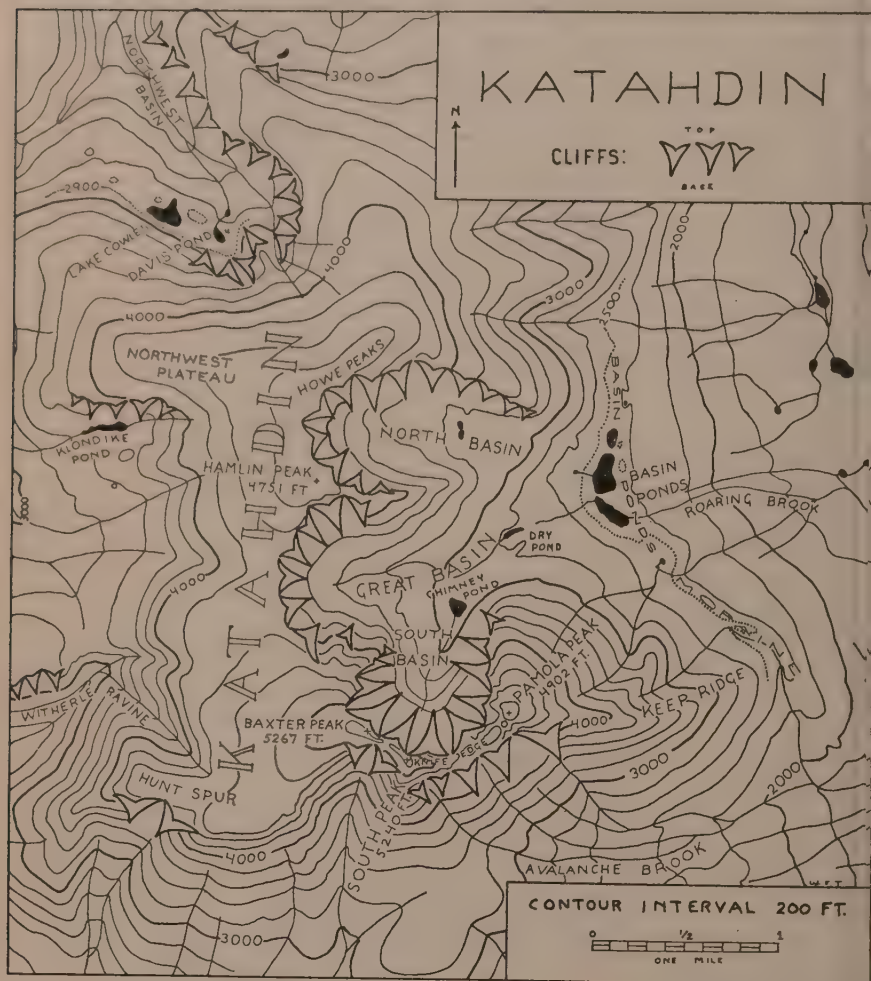
Will F. Thompson

Paint applied to one of the abraded and striated ledges on Tuckerman headwall in the autumn of 1959 was found in the spring of 1960 to have been worn and striated during the winter in the same pattern as the rock. There is thus no question but that avalanches are responsible for abrading the headwall. (See Imamura and Hirabayasi, 1935; Dyson, 1937; Matthes, 1938; on snowslide striations and avalanche abrasion.) Actually, the abraded surface is quite fresh, resembling rock carved out within a few years and somewhat worn and battered since, whereas at that level on the Presidentials even the best preserved roches moutonnées polished by continental ice would at least be discolored to an appreciable depth.

Study of seasonal snowfields and bouldery detritus in the upper basin of Tuckerman Ravine indicates that a local glacier has occupied its floor since continental deglaciation. Pickering (1880) studied the avalanche-fed snowfield at the base of Tuckerman headwall (the "Snow Arch" of summer visitors) and found that though it now lasts through only an occasional summer (see Havens, 1960), it nevertheless still acts like a small glacier in some ways. He measured motion of eight inches per day in mid-summer, which causes enough erosion to keep much of the lower part of the headwall free of accumulated avalanche debris. If snowfall were a bit heavier, or summers a bit cooler, the field would regularly last from season to season and thus become a small glacier. The size of the compound cirque and outlet trough of Tuckerman Ravine indicates that its glacier has been quite large in the past.

Because it is sunny, the northern side of the eastward-facing upper basin of Tuckerman Ravine is free of snow much earlier in the spring than the opposite side. For the same reason, it has presumably been free of glacial ice longer. Beginning at a point a short distance down-valley from the headwall (see Fig. 1), its talus, unlike that of the shady slope opposite, has become well differentiated into an underlying congeliturbate layer and a mantle of felsenmeer boulders, the latter especially coarse near the mouth of the upper basin. Creeping of the felsenmeer has built up a "pro-talus ridge" at the base of the sunny slope, especially below the coarse felsenmeer. The ridge is a linear accumulation of a sort fairly common elsewhere in New England cirques and glacial troughs, as well as in appropriate sites in the Rockies and presumably in similar mountain climates elsewhere. Such ridges have been explained as the result of seasonal persistence of fields of old snow at the base of talus slopes, the compact surface of which is presumed to shed rockfall debris from its surface, protecting a basal moat ("pro-talus moat") from accumulation of such detritus and forming a bouldery ridge at the lower margin of the snow (Tarr, 1900; Daly, 1912). Long-lasting snow-

fields of suitable conformation have not been observed associated with pro-talus ridges, however, nor do pro-talus ridges occur where free rockfall makes a significant contribution to talus. Some avalanche-carried detritus may accumulate on such sites but is let down onto the beds of persistent snowfields rather than



at their downhill margins. Possible causes of pro-talus ridges will be discussed further when examples from Katahdin are described.

Lobate rock glaciers (Wahrhaftig and Cox, 1959) are large bulges of bouldery detritus advancing from felsenmeer-clad or talus-clad valley walls toward mid-valley. The manner in which they move is discussed below. Wahrhaftig and Cox considered them the first of three stages in rock glacier evolution, two of

which occur in New England. For reasons discussed later they often seem to be associated with pro-talus ridges. Such a bulge, mantled by very coarse felsenmeer, has pushed out from the Tuckerman pro-talus ridge at the scarp (the Little Headwall) between the upper and lower basins of Tuckerman Ravine. It appears in the right foreground of Figure 1. Because of the altitude of the valley floor where it originated, the lobe has the form of a tongue extending down-valley as much as across, but since it originates on the side of the valley and has not yet reached its axis it must be considered still lobate. Along the valleyward edge of both the pro-talus ridge and the rock glacier there is a moraine-like marginal ridge (R. P. Goldthwait's "J-shaped ridge", 1939) such as characterizes many such masses in other regions (Wahrhaftig and Cox, 1959). The marginal ridge is visible in the right foreground of Figure 1; note that a trail has been cut along it leading to the upper basin of Tuckerman. The stream of very coarse felsenmeer behind it is the rock glacier itself.

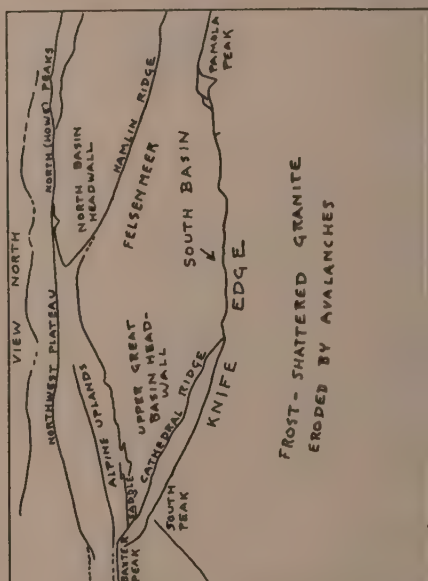
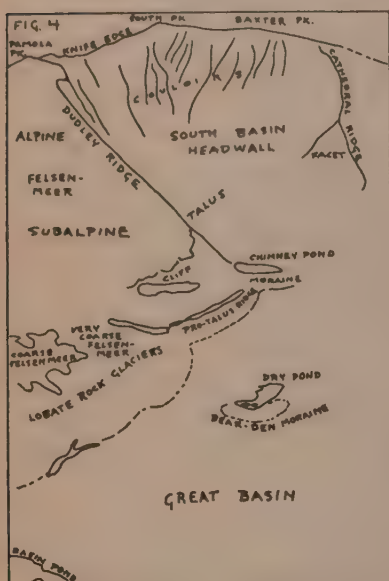
Because frost is more intense on the shady part of a cirque floor, lobate rock glaciers and pro-talus ridges usually develop there, rather than on the sunny side as in this case. In the upper basin of Tuckerman, on the other hand, talus near the headwall and on the shady side of the upper basin is not yet entirely converted to felsenmeer, much less forming pro-talus ridges or rock glaciers. Presumably glacial ice has lain there too recently for such movements to have begun. The last remnant of ice may have been present just to the south of the headwall within a few centuries. It will be shown later that evidence of post-continental local glaciation in other cirques, especially on Katahdin, greatly strengthens this argument.

Presidential Rock Glaciers and Morainal Deposits

Except in Tuckerman and King Ravines, the Presidentials have little to compare with the display of frost-worked glacial moraines and related features on Katahdin. There are actually no conspicuous glacial moraines left on the slopes and uplands of the Presidentials. However, they have plenty of dispersed post-continental moraine material and other bouldery subalpine detritus the forms of which are only partly obscured by subalpine forest. Pro-talus ridges seem to be evolving at the base of the walls of Jefferson Ravine. Two rock-glacier lobes mantled with avalanche detritus, advancing from its southeast wall, occupy most of the floor of the Great Gulf cirque, the uppermost damming back little Spaulding Lake. (Remnant glacial ice may have lain near Spaulding Lake almost as recently as in Tuckerman.) Another rock-glacier lobe occurs at the head of the Ravine of the Castles. The finest rock glacier in New England occupies

King Ravine (Fig. 2) and has been referred to earlier. It is a perfect example of Wahrhaftig and Cox's second stage of rock-glacier evolution, the "tongue-shaped rock glacier", comparable in form to true valley glaciers.

Howe's observations in the San Juan Mountains of Colorado (1909) enabled J. W. Goldthwait (1913) to recognize the analogy between rock glaciers there and those in King Ravine and the Ravine of the Castles in the Presidentials, even though the latter appears in photographs to be a rather obscure small lobe. Goldthwait accepted Howe's conservative conclusion that such masses are landslide deposits, now static. However, Spencer's original brief description of the San Juan rock glaciers (1900) recognized their dynamic aspect. By 1910 Capps had noted good evidence of



movement of an Alaskan rock glacier. The motion of rock glaciers has been measured in the Alps by Chaix (1919, 1923, 1943) and in Alaska by Wahrhaftig and Cox (1959). It amounts to a few feet per year at most, much less than that of true glaciers of comparable dimensions.

Wahrhaftig and Cox's observations, considered in the light of our understanding of felsenmeer structure, make it clear that rock glaciers are great accumulations of silty, stony congeliturbate similar to that beneath felsenmeer, so deep and filled with ice that they flow slowly, just as a glacier does, instead of merely creeping like felsenmeer. They are covered with felsenmeer boulders and, as in Tuckerman Ravine, may be margined by a moraine ridge. On the other hand, like glaciers, they often lack



Fig. 3. KATAHDIN OVER THE KNIFE EDGE
(See diagram opposite)

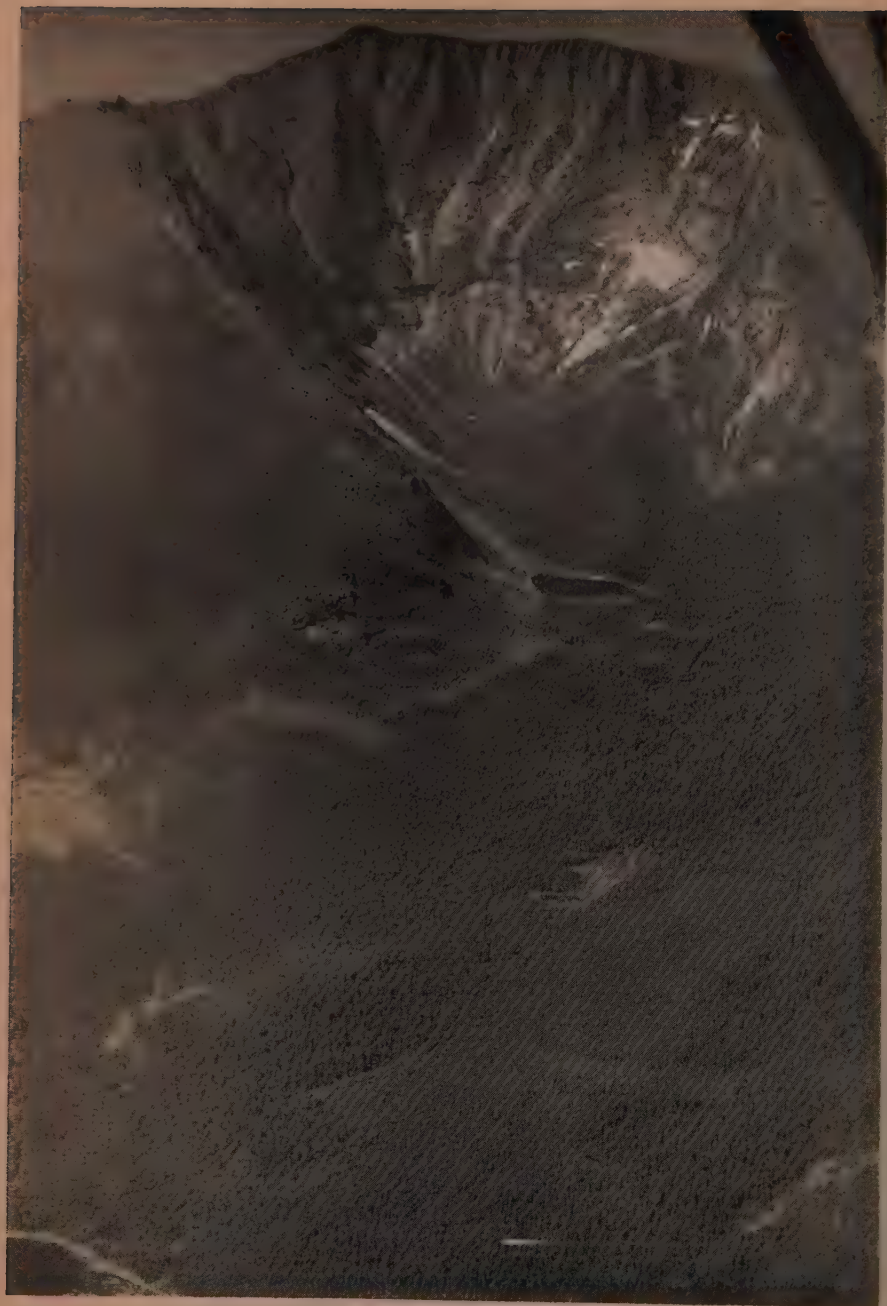


Fig. 4. SOUTH BASIN, KATAHDIN
(See diagram, p. 464)

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peripheral moraines. The King Ravine example has none. The King Ravine rock glacier is about two-fifths of a mile long from the foot of the ravine headwall to its snout. Its source is felsenmeer, formed on talus, around the wall of its cirque. The felsenmeer on its surface is very coarse even for New England, many stones being forty or fifty feet long. The coarseness of New England felsenmeer in general is probably due to the massive character of mountain-forming rocks in the region and to the vigor of its frost, winter temperatures being severe and moisture for formation of soil ice being abundant. The coarsest New England felsenmeer occurs on rock glaciers, perhaps because more complete frost sorting is possible there than in the shallow congeliturbate of normal felsenmeer. On the other hand, lobate rock glaciers on which avalanche detritus is regularly deposited, as in the Great Gulf, may not have well-developed felsenmeer on their surfaces.

Upham (1898) believed that close study would reveal moraines in the glacial cirques and troughs of New England mountains closely comparable to those in similar situations in western Europe. Failure to find the expected moraines in the Presidentials forced the elder Goldthwait to believe that there had been no post-continental local glaciers there. Actually, most of the moraines in question must have been dispersed by felsenmeer creep and rock-glacier flow immediately upon being deposited (see comments on the Chimney Pond moraine and others on Katahdin). The moraine materials now form the bouldery valley fill of Presidential cirques and their outlet troughs. On the other hand, Tarr (1900) noted conspicuous and strongly patterned moraines on Katahdin. However, some of the Katahdin deposits have peculiarities which indicate that they are not simple moraines of primary alpine-glacial deposition like those of western European mountains.

Katahdin and the Presidentials: Instrumental Climatic Comparisons

Though there is ample non-instrumental evidence of its climatic similarity to Mt. Washington (its vegetation, the character of its felsenmeer, scarcity of outcrops and stream channels above timberline, differentiation of windward and leeward slopes, and general topographic development), there is no summit observatory on Katahdin or other source of acceptable instrumental climatic data from its slopes. However, climatologists and geographers have long been accustomed to make rough estimates of climate at various levels in mountains, based on calculated climatic gradients presumed to represent the region. Such estimates, for what they are worth, confirm the non-instrumental observations in this instance. Values estimated for the summit of

Katahdin were surprisingly close to those observed on Mt. Washington, the cooler and somewhat moister climate recorded at its base very nearly offsetting the effect of its lesser height. Estimated mean annual precipitation on its summit was 68.3 inches, compared with 70.5 observed on Mt. Washington; estimated mean annual temperature was 27.5°F., compared with 27.0°. The calculated climatic gradients near Mt. Washington, on which the estimates were based, were 3.1°F. and 5.7 inches per 1,000 feet. However, lowland stations are scarce near Katahdin and those near Mt. Washington give inconsistent data because of rough sites (U.S. Weather Bureau, 1959). Thus, the indicated climatic difference between the two summits is much less than the probable error of the estimates.

As a matter of fact, the existence on Katahdin, but not on the Presidentials, of unsymmetrical and incompletely developed but valid west-facing cirques (Witherle Ravine and the Klondike Pond basin), as well as the extent of its local post-continental glaciers generally, indicate that during the recent geologic past Katahdin must have been somewhat wetter than Mt. Washington at levels having equivalent mean annual temperatures, rather than slightly drier as the estimates suggest.

Post-Continental Local Glaciation on Katahdin

Tarr (1900) observed erratics close to Baxter Peak, the highest summit of the Katahdin massif (see map, p. 462), but noted also that the Knife Edge (Figs. 3 and 4), a ridge which curves eastward from that summit along the crest of the South Basin headwall to Pamola Peak, is too sharp and deeply shattered to have survived in its present form the indicated complete submergence of the range by continental ice. The steepness and fresh-cut appearance of the South Basin headwall (Fig. 4) and the presence in the valley below of what appear to be moraines much better preserved than is usual at such levels in New England, convinced him that the ridge had been sharpened since continental deglaciation by headward erosion of the cirque by local ice. No significant evidence to the contrary has yet been advanced. As on cirque headwalls described by Matthes in the High Sierra (1938), the smooth exfoliated surface shown on the South Basin headwall in Figure 4 indicates the area occupied until recently by local ice. Avalanche chutes on the shattered upper headwall terminate downward at the former ice margin, as Matthes noted in his cirques. Severe frost shattering of the upper wall, compared to surfaces similarly exposed in Sierra cirques, is due to the rigors of New England alpine climate rather than to difference in age of the surfaces in question. One is therefore inclined to correlate the most recent glaciation of New England mountains with that which Matthes found had been widespread relatively recently in

western mountains and which he described as the "Little Ice Age".

It might be argued that the South Basin is so favorable a site for a post-continental local glacier that the recent existence of one there does not necessarily imply occurrence of similar glaciers elsewhere in the region. The same cannot be said of the much less favorably located basins of Lake Cowles and Davis Pond in the Northwest Basin, which were once occupied by a post-continental local glacier. They are the only lakes in any New England cirque which are known to lie in basins carved entirely from bedrock. Because the two lakes are in basins cut in bedrock, they could have been carved out and left open only by a glacier. And only by a local glacier. For the valley in which they lie faced the flow of continental ice, which could hardly have evacuated it without filling the lake basins with drift. Moreover, the easily recognized fine-grained sedimentary and igneous continental-glacial erratics which are consistently abundant in continental drift in the vicinity of Katahdin are absent or very scarce near the lakes and for a considerable distance down the valley. All the detritus observed here is Katahdin granite. The size and situation of these lakes is such that if the continental drift once present in their vicinity had been removed not by a glacier but by streams and mass wasting, their basins would have been filled and the lakes eliminated.

The two lake basins were carved out at the base of a low head-wall (about 500 feet high) on the southwest side of the Northwest Basin at a spot more favorable than the rest of the valley for collection of snow drifted off the alpine upland of the Northwest Plateau by southerly and southwesterly winds. (A considerable belt of stunted forest now intervenes, however, between the head-wall and the alpine zone on the plateau.) Furthermore, there are no high-lying surfaces to the west, northwest or north from which snow might have been drifted onto the site. Moreover, the lakes lie somewhat lower than most Katahdin cirque floors. When their cirque had a post-continental local glacier, therefore, many cirques more favorably located on the Presidentials and Katahdin must also have had local glaciers.

Older Cirques in New England Mountains

Most of the recent glaciers in New England mountains were concentrated in the two major massifs. However, it is important to note, for the sake of future comparisons with other mountain regions, that there seem to be at least two generations of cirques on New England mountains which are older and more widely distributed than those occupied by local glaciers since final continental deglaciation. Some, typified by the Ravine of the Castles in the Presidentials, are still so nearly intact that they must have

had glaciers shortly before the onset of the last continental ice, though they have apparently had none since. The part of the Northwest Basin which has escaped recent glaciation seems to be a cirque contemporary with the Ravine of the Castles. Other, lower, cirque-like basins are far more modified by stream erosion and their headwalls are more completely graded by mass wasting. Except for the frequency with which such otherwise anomalously broad-headed basins are associated with the higher parts of New England mountains, it might be doubted whether many of them are cirques at all.

Such basins may be distinguished from ordinary stream-cut valleys by their broad heads lying immediately beneath prominent summit ridges, often dissected by short, steep ravines which give rise to a fan pattern of streams converging from the basin walls toward mid-basin. Their floors are often flat, or appear to have been flat before being trenched by stream courses. Though the ancient (pre-Wisconsin) glaciers which presumably carved them out must have been fed at least in part by snow drifted from the associated alpine uplands, the basins in question are like recently sharpened cirques in the Torngat mountains of northern Labrador (Forbes, 1938) and unlike recently active New England cirques in that, though they are associated with what are or have been windswept mountain uplands, they do not cluster in the lee of these. In other words, the very old cirques in New England may have been developed north of the zone then occupied by the prevailing surface westerlies in winter.

The Klondike depression, west of Katahdin, is a particularly fine and ancient-appearing example of such a basin, its boggy floor still untrenched even though its walls have been deeply dissected by ravines and entirely graded by mass wasting. The Israel and Ammonoosuc valley-heads just west of the Presidentials are more typical of such basins throughout New England mountains. Tuckerman and Huntington Ravines scallop the rim of still another possible ancient cirque, centered on a junction of three streams at the 3000-foot level below Tuckerman. A remnant of its old headwall forms the subalpine scarp below the Alpine Garden (see Part II).

Three Confluent Lee-Side Cirques on Katahdin

Even though certain phenomena in them are not entirely understood, this study would be incomplete if we did not discuss the forms which have been developed, as Tarr noted, in morainal and associated detritus in the three great lee-side cirques of Katahdin. The several processes active there have obscured one another to some degree. The resulting valley-bottom forms are partly covered with dense forest and brush which prevent detailed field examination and hamper photo-interpretation. Never-

theless, the forms which are visible are of great interest because glaciers and associated processes have been somewhat more active and extensive on Katahdin since continental deglaciation than they have been elsewhere in New England.

The estimated mean annual temperature at Chimney Pond in the South Basin (Fig. 4) is roughly the same as that at Hermit Lake in Tuckerman Ravine. It is noteworthy, therefore, that the South Basin headwall rises almost twice as far above Chimney Pond at its base as Tuckerman does above Hermit Lake, and three times as far as Tuckerman does above the floor of its upper basin. It is the height and breadth of its headwall and the height of the graded alpine surfaces to windward, rather than their remaining extent, which account for the size and vigor of the recent glacier in the South Basin. The North Basin headwall (right side of Fig. 5) stands about as high above its cirque floor as that of Tuckerman does above Hermit Lake, but it is much more massively and extensively cliffed. It must have been glaciated at least as recently as the South Basin, since cliffs do not remain so little weathered for long at alpine levels in New England. The upper Great Basin (left side of Fig. 5), the central cirque of the three great lee-side cirques of Katahdin, heads at the Saddle Col, the lowest part of which is barely in the alpine zone. It thus has a lower headwall than the other cirques and seems to have had considerably more time to become weathered and eroded by non-glacial processes. Its headwall is dissected by avalanche gullies to about the same extent as those of the Great Gulf, Tuckerman and Huntington Ravines in the Presidentials. Moraines of local glaciers presumably once present on the floors of those four cirques are now equally dispersed and inconspicuous.

The South Basin is confluent with the upper Great Basin at Chimney Pond to form the Great Basin proper (see Fig. 5 and map, p. 462). The North Basin is confluent with the Great Basin just upvalley from the Basin Ponds, a line of moraine-dammed ponds which stretches across the whole mouth of the cirque-embayment. The Basin Ponds moraine, the downhill face of which is generally about a hundred feet high throughout its length but is higher locally, lies along the crest of an east-facing scarp separating the cirque-embayment from a broad through valley, shaped by continental ice, which lies east of Katahdin. The upvalley face of the moraine is much less high, though individual crests are conspicuous. Its altitude is remarkably constant, the bulk of it consistently lying between the 2400- and 2500-foot contours from Keep Ridge northwestward.

Though it is by far the finest moraine associated with any New England cirque, that fact and certain peculiarities have led to discussion. Close association of such unusual features seems to imply a cause-and-effect relationship, yet that relationship has

been questioned. Hamlin (1881) was the first to describe the moraine. Tarr (1900) explained it as the terminal moraine of local post-continental glaciers in the cirques upvalley; certainly it terminates their moraine system, since Katahdin material gives way downslope to tills rich in non-Katahdin erratic material. However, Antevs (1932) observed that it is fairly regularly convex upvalley and extends not only across the mouth of the cirque-embayment but also southeastward along the contour to the toe of Keep Ridge, the easternmost spur of Pamola Peak (see Fig. 6). It then descends the south slope of Keep Ridge to the bank of Avalanche Brook. Its form on the map is thus that of a lateral moraine of the remnant tongue of continental ice which must once have lain in the lowland east of Katahdin. Nevertheless, its accessible parts seem to be almost all Katahdin granite, thus being in sharp contrast with the continental-glacial till downvalley.

Antevs' proposed solution was that the moraine is medial, formed between Katahdin ice and the remnant of continental ice. Medial moraine deposits so well formed are unusual in mountains, however, even where other kinds of well-formed moraine are common. Transport by medial moraines in general is probably much less than their dramatic appearance on living glaciers might imply; such active medial moraines consistently have very large ice cores. The Basin Ponds moraine conforms too closely to the expected form of a lateral moraine to be plausibly called medial. For example, it hugs the foot of Keep Ridge too closely to have permitted the passage of tributary ice, or even meltwater, from the Katahdin cirques.

A lateral moraine formed by the continental-ice tongue invoked by Antevs should contain considerable non-Katahdin material. At least part of any medial moraine formed between that ice and other glaciers should similarly be rich in erratics. Thus R. P. Goldthwait (1939) and Caldwell (1959) reported in support of Antevs that fine-grained sedimentary and igneous erratics foreign to Katahdin occur at least locally on the flanks of the Basin Pond moraine. However, considering that Goldthwait's sample from the pond shore was of pebbles, and assuming that Caldwell's sample on the final ridge of the moraine downvalley was also local and omitted consideration of the abundant large boulders of Katahdin granite in the moraine, the amount of erratic material reported was not more than might be due to incomplete intermixture of continental-glacial till brought down from higher on Katahdin, or to disintegration nearby of one or more of the occasional erratic boulders presumably derived in similar manner. General and very definite dominance of Katahdin granite is evident in both vicinities, and similar local occurrences of erratic material have been seen in the lower Great Basin above the moraine. Below the final ridge mentioned by

Caldwell (note its very interesting pattern in Fig. 6), one passes rather abruptly onto continental-glacial till which has a much higher proportion of erratic material than anything upvalley. Until we have further evidence we are thus confronted with what seems to be a lateral moraine containing little of the characteristic drift of the glacier by which it was formed. Furthermore, it seems better preserved than experience in the region would lead one to expect, considering its altitude.

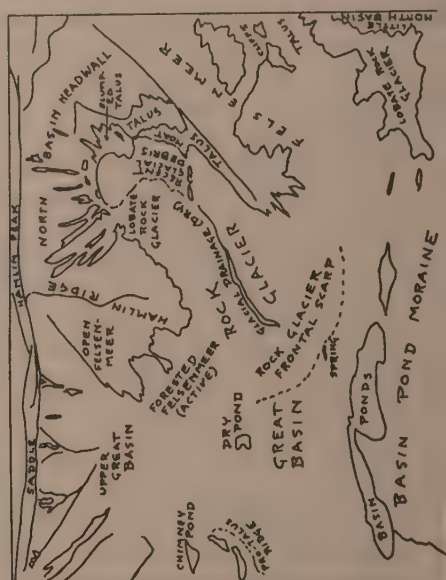
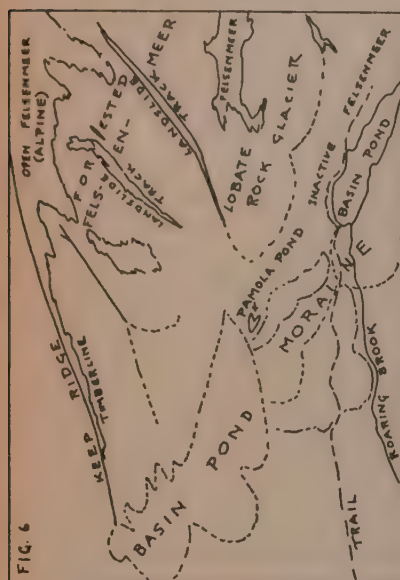
Deposits of the Katahdin Post-Continental Glaciers

Talus is accumulating rapidly upstream from Chimney Pond in the valley which gives access to the foot of the South Basin headwall (Fig. 4). Freshly broken rock is abundant below the headwall in that valley, and impact marks of rockfalls are numerous in the couloirs upslope. The talus below them is nevertheless decidedly scant, considering the height of the cliff above. It is trenched and ridged by avalanches. No sorting by frost is evident on those slopes, nor do they show any evidence of creep. Below the terminal facet of Cathedral Ridge, just to the right of the headwall in Figure 4, more ample talus slopes have accumulated because glacial ice has been absent longer. Felsenmeer terraces and pro-talus ridges have developed on them and are especially evident in other views (Thompson, 1960). The Chimney Pond moraine has also been greatly wasted down, though recession of glacial ice from it is one of the more recent events recorded in the Katahdin landscape. It must have been subject to severe mass wasting for a considerable time even before the ice receded. If other New England moraines have been modified as promptly, their usual obscurity is understandable.

Downvalley from Chimney Pond toward the Basin Ponds, active or inactive felsenmeer is widespread and locally very coarse. Halfway downvalley toward Basin Ponds, Tarr's "Bear-Den Moraine" may be seen at Dry Pond, where it forms a ridge enclosing a kettle in which the water level fluctuates greatly. Drainage from the pond passes underground through broad crevices in the moraine which are partly blocked by peat and decaying wood. The size of the boulders in the barrier ridge and the completeness with which they have been sorted out from finer material are reminiscent of the King Ravine rock glacier. The ridge seems too abrupt to have formed either on an ordinary felsenmeer surface or on an active rock glacier, but might have been formed by uneven thawing and subsidence of a rock glacier. In that connection, it is well to study the North Basin.

Most of the upper half of the North Basin (Fig. 5) is floored with a detritus mass which Tarr simply called "morainal". It is a chaos of hummocks of incompletely frost-sorted moraine. The nature of its margins, discussed later, seems compatible with its

probable origin as debris of a detritus-laden true glacier which melted in place. The chaotic sector ends downvalley at a pair of small lakes which are both fed and drained underground. The detritus-scarp against which they have formed is ten or twenty feet high and marks the upper end of a graded surface of felsenmeer (very poorly represented on the Geological Survey topographic map), which is almost as coarse as the Bear-Den Moraine. The graded surface slopes downvalley in general, though its uppermost part seems to have settled somewhat, causing a slight reverse slope in a dry, boulder-filled channel which traverses it. The channel, which once carried a melt-water stream from the true glacier above, is visible in Figure 5 most of the way down a



400-foot boulder scarp at the mouth of the North Basin. Farther down, the stream was lost among the boulders. Its course trends toward a spring in which the North Basin drainage still emerges just above Basin Ponds. The graded surface can be interpreted only as the upper surface of a rock glacier of a type described by Wahrhaftig and Cox, developed of morainal detritus at the foot of a true valley glacier and recently forming a continuation of that glacier downvalley (as many rock glaciers do, for example, in Alaska). In instances of this sort Wahrhaftig and Cox note that the true glacier may recede from contact with the rock glacier, leaving a pit such as that in which the two small North Basin lakes lie. The 400-foot terminal scarp of the North Basin rock glacier appears to mark its descent over a bedrock scarp be-



Fig. 5. UPPER GREAT BASIN AND NORTH BASIN, KATAHDIN
(See diagram opposite)



Fig. 6. BASIN PONDS MORaine FROM KEEP RIDGE

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neath, the North Basin having been a hanging valley even before the formation of the rock glacier.

When cut off from its source of detritus, such a rock glacier must lose gradient and eventually stop flowing. The North Basin rock glacier has apparently become separated from its parent true glacier very recently, in terms of the rate at which such changes occur. It would appear that a similar rock glacier originating below the South Basin true glacier might have been similarly isolated long enough ago to become entirely inactive, thus producing the situation described in connection with the Bear-Den Moraine and associated valley-floor forms.

It may further be tentatively suggested that true post-continental glaciers may at a still earlier time have advanced to the sites of the Basin Ponds and there produced morainal rock glaciers. Such masses advancing across an older Basin Pond continental-glacial lateral moraine, in the area which has been accessible for study, may have superimposed their terminal moraines on it and then in thawing settled enough to leave the upvalley face of the old moraine still evident. Felsenmeer, now inactive, such as might have formed the surface of such rock glaciers, is still present above the moraine and on its upvalley face. This hypothesis might be checked by digging pits in the moraine near Keep Ridge, where brush and lack of exposures have combined to prevent study. Unless that area, also, has been covered by rock-glacier detritus (lobate rock glaciers originating upslope and now inactive), that part of the moraine should be mostly of continental-glacial drift. Its prominence and its surface patterns in Figure 6 suggest some degree of upbuilding, however, rather than constant down-wasting since continental deglaciation.

Valley-Margin Forms

On the margin of the valley fills in the three confluent cirques various interesting forms have developed. Lobate rock glaciers occur along the south side of the North Basin (Fig. 5), where they seem to have pushed aside the true glacier to some extent. Downvalley the band of lobes merges into the main North Basin rock glacier, forming the part of it lying south of the dry stream-bed. Others occur at the base of Pamola downvalley from Dry Ponds, south of the old course of the South Basin glacier (Fig. 4). All of them are mantled with coarse felsenmeer, continuous upslope with felsenmeer on the mountainsides above. The Pamola lobe farthest upvalley (Fig. 4) is as coarse-surfaced as the King Ravine rock glacier. The big blocks are from a cliff just upvalley, carved in the valley wall by the South Basin glacier. The glacier carried the blocks about a quarter-mile down the valley and deposited them as lateral moraines. Later they became incorpo-

rated in the rock-glacier lobe and were upheaved by frost to form its surface.

Pro-talus moats and ridges are found in the Katahdin cirques only where talus has been deposited on valley fill. Thus they occur only below cliffs, never below uncliffed slopes bearing only felsenmeer. On the other hand, we have noticed that neither do they occur under very recent talus; some degree of creep seems necessary to form them. Loading of the margin of a frozen valley-fill by the initial creeping movement of talus becoming converted to felsenmeer seems indicated as the cause of the moats; the ridges are thrown up by the resulting thrust. The moat is later filled by creeping felsenmeer and rock-glacier lobes may begin to form, as in Tuckerman Ravine. A prominent pro-talus moat and ridge lying between the Pamola lobate rock glaciers and the Chimney Pond moraine might be mistaken for a lateral moraine, except that it turns upslope at its junction with the rock-glacier lobe farthest upvalley. A very similar moat and ridge in the upper Great Basin, upvalley from Cathedral Ridge, extends too far up toward the headwall of that cirque to be considered a lateral moraine. Along the north wall of the Great Basin unforested felsenmeer from the ridge above (Hamlin Ridge) is creeping out onto the forested valley fill in shallow tongues; there is thus neither moat nor ridge on that side of the valley.

A pro-talus moat and ridge are continuous under the cliffed headwall and beneath the precipitous north wall of the North Basin, forming that margin of both the chaotic morainal sector upvalley and the rock glacier downvalley. To some degree the ridge may represent a lateral moraine, but it is interesting to note that though the talus below the cliffs seems to have been somewhat caved down, as though settling of the valley fill had left its toe unsupported, the moat has not been filled, or if filled, has reformed beyond the new deposits. At the head of the cirque is a detritus mass which might be a lobate rock glacier except that it is separated from the talus above by the moat. In view of the evident recency of recession of the true glacier it seems possible that some of its ice remains in that mass, deeply buried by moraine. Caving of talus beneath the north wall just downvalley from the presumed remnant mass is so recent that a difference in degree of lichen cover is evident between it and adjacent slopes.

Summary and Comments: Mountain Clima-Geomorphology in New England and the World

In the more rugged parts of New England, as in other mountain regions, topography in the alpine and subalpine zones is

regionally distinctive because the climate and climate-sensitive processes of those zones have long been similarly distinctive. Clima-geomorphic comparison of the higher parts of such regions, based on studies like this one, can thus clear up many important problems in mountain physical geography which persist because classical climatology, relying mainly on data from instrumental stations, is unable to differentiate adequately among the complex climates of such terrain.

The most distinctive geomorphic process in New England mountains is the creep of their remarkably coarse and widespread felsenmeers (mantles of boulders upheaved by frost). In the continental climate of the New England mountains, which is quite moist at all seasons, severe seasonal frost and deep thaw rive bedrock and heave up the larger fragments to produce such boulder mantles. Vigorous soil frost in the developed felsenmeers is further favored by convection in their crevices (Balch ventilation) caused by the thermal gradient which exists in winter between air within and outside them. Reversal of the thermal gradient in summer hampers crevice ventilation and delays seasonal thaw. The net year-round effect is refrigeration not only of the underlying stony, silty, frost-stirred soil (congeliturbate), but also of bedrock beneath. The congeliturbate is mostly formed as residue of felsenmeer formation and weathering, and has generally been assumed to be protected from frost by the blanket of open-jointed boulders above it. Regular seasonal formation and thaw of masses of frost in the congeliturbate cause the overlying felsenmeer to creep; intensified seasonal frost in bedrock regularly rives new boulders to maintain the wasting felsenmeer.

On especially prominent mountain ridges, summits, and high exposed slopes in New England, Balch ventilation is facilitated by violent prevailing winter westerlies which keep such surfaces (the alpine uplands) almost stripped of snow. Hence, they consistently have permafrost, as do favorable sites even far down in the forested subalpine zone. Even at subalpine levels, felsenmeer creep is fairly active on most steep slopes in spite of forest cover and considerable snow. On the windswept alpine uplands, where such creep is especially vigorous, it not only acts effectively, in combination with associated mass-wasting processes, to produce moderate to low gradients, but also overloads all potential drainageways with detritus, so that run-off is too dispersed among the felsenmeer boulders to dissect the surface. Furthermore, because they are so completely windswept, New England alpine uplands have long remained undissected by alpine glaciers. Instead, the cirques and now-vanished local glaciers associated with the uplands have all been formed in adjacent subalpine sites which collect and conserve snow blown off the heights above.

Because their energies are concentrated in channels, subalpine

streams and glaciers in New England mountains have not only been able to carry away the coarse detritus fed into them by landslides, felsenmeer creep, and other processes, but at the same time have carved out the cirques and gorges which dissect and thus steepen subalpine slopes in New England. The detritus load they carry is such that most such drainageways must retain considerable gradient, so that they have not eroded headward far enough to destroy all the alpine uplands. Recent glaciers have sharpened the headwalls of many cirques and have deposited moraines downvalley which have all been at least somewhat reduced, and in most valleys more or less completely dispersed, by mass wasting. Earlier glacial erosion by continental ice, substantial in nearby low passes, was not severe at alpine and subalpine levels.

Felsenmeer-graded summit surfaces similar to those of New England are common in the Rockies and presumably in the mountains of central Asia, associated with cirques fed by drifted snow. Upland felsenmeer is also widespread in parts of the Great Khingan Mountains of western Manchuria (Imanishi, 1950), and probably in other ranges in northeastern Asia, but its relations to local glaciation there are not known. In the Colorado Rockies such felsenmeer is less coarse than in New England, probably mostly because uplands there, which are so sheltered from marine influence as to have really severe winter temperatures, are for the same reason too dry for the full development of frost heave. In the Wind River Range, moister and farther north, summit felsenmeers are quite coarse.

In the Torngat Mountains of northern Labrador (Forbes, 1938; Ives, 1958), many mountaintops are graded by felsenmeer creep which is apparently very similar to such creep on New England alpine uplands. Temperatures presumably fall lower than on New England summits, but precipitation is probably less and the depth of summer thaw must also be quite limited. Felsenmeers similar to those of the lower parts of the New England subalpine zone occur on mountains in Maryland (Smith, 1949), West Virginia (W. C. Robison, personal communication, 1960), and perhaps on the Great Smokies and other high summits in North Carolina. As in New England, felsenmeer at low-subalpine levels can at best be only moderately active.

Climate analogy with mountains having relatively strong seasonal freeze and thaw is also indicated by the presence of rock glaciers in New England. Rock glaciers occur high up on the eastern (leeward) slope of the southern High Sierra (Kesseli, 1941), in presumably similar sites in the Andes of central Chile (Lliboutry, 1953), in the Rockies (Spencer, 1900, and many others), in the most sheltered interior valleys in the Alps (Chaix, 1919), and in the Tien Shan of mid-Asia (Iveranov, 1950). They are very common in the Alaska and Brooks Ranges. As in other

regions, some New England rock glaciers and related phenomena seem to have developed as morainal extensions of local true glaciers now vanished.

Mountain regions lacking strong seasonal freeze and thaw are quite different from those cited above. Moist mid-latitude and subarctic mountains in the southern hemisphere, and the more maritime ranges in such latitudes in western Europe and North America, including the Aleutian Islands (Thompson, 1950, 1954), show relatively scant development of felsenmeer, if any, and no rock glaciers. Many high tropical mountains have only diurnal frost. Such frost is geomorphically very effective at certain levels because of its frequency and vigor (Troll, 1941, 1943-44), but it is too shallow to produce felsenmeer or rock glaciers.

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MAN IN LOVE WITH A MOUNTAIN

by WELDON F. HEALD

THE GREAT HEART-THROBBING ROMANCES of history are celebrated not only in prose, poetry and song. They have also been subjected to Freudian analysis. Through the interactions of ids, repressions, transferences and sublimations the loves of Dante for Beatrice, Abelard for Eloise, and Edward for Wallis are made understandable to us science-oriented moderns. The symptoms of tenderness, passion, devotion and sacrifice expressed in iambic pentameter are not enough. We now demand the exacta of case histories.

But what might our inquisitive libido-probing specialists reveal were they to wield their psychiatric scalpels upon Count Henry Russell's consuming attachment for the Vignemale? Here was a splendid, single-minded obsession that endured for forty-six years. Yet certainly it was one of the strangest love affairs the world has ever known. For the adored recipient of the suitor's ardor was not a woman, but a mountain.

However, even the layman would suspect that the Count's unique inheritance and background predestined him to be an errant non-conformist. He was born at Toulouse, France, in 1834, heir to a papal title. His parents were an Irish-Catholic nobleman and a sister of Napoleon III's chamberlain. Christened Henry Patrick Marie Russell-Killough, in an engaging mixture of Celtic and Gallic, the Count's name perhaps gives the principal key to his complex character. Inherited from the Irish were an elastic temperament, a strain of mysticism, broad drollery, and a love of life; from his mother's side came social grace and charm, sharp wit, musical talent, and that special amenity of France, the ability to produce sparkling conversation. A friend once remarked that he resembled a capering Irish bull controlled by the lasso of French logic.

In addition, he was never forced to descend from his privileged position to wrestle with the more unpleasant aspects of economics. The result was that the Count represented a late but heroic expression of the romantic era, uninhibited by the realities of the Industrial Revolution. He lived in an exalted world where art, poetry, music and the intellect dominated; science, commerce and practical politics were the concern of the common man. What more fertile field could there be for the cultivation of fanciful eccentricities, if not downright aberrations?

Our couch-and-question practitioners also insist that early

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childhood impressions are all-important in the formation of adult personality. More aptly put, the boy is father to the man. In this case the major character-shaping stimulus is not hard to find. Fifty miles south of the proud and affluent old city of Toulouse the long, serrated crest of the Pyrenees cuts across the sky. The snow-crowned peaks, swelling ridges, and deep, narrow valleys are a constant challenge to the romantic, the imaginative, and the adventurous. Young Henry was all three.

At the age of six he was taken into the heart of this then mysterious mountain realm, and walked the rough track from Cauterets to the Lac de Gaube. There he suddenly stood face to face with his future inamorata, the Vignemale. Rising in a spectacular north-facing precipice a full mile above the lake, it reaches an elevation of 10,820 feet and is the highest Pyrenean summit on the border between France and Spain. As the impressionable boy looked at the Vignemale there were implanted within him seeds of tenderness and yearning that later blossomed into the ruling passion of his life.

But the human psyche is a volatile phantom which refuses to be bound by mathematical formulae. Its ways are obscure and inexplicable. Although Henry first gazed upon the beloved form of the Vignemale in 1840, twenty-three years passed before he stood upon its top and claimed the mountain for his own. They were busy, formative years in which the young Count received his education in France and Ireland, and later made several lengthy trips to North and South America, Asia and Oceania. But he eventually returned in 1863, at the age of twenty-nine, and the rest of his life was quite simply and completely dedicated to the Pyrenees.

His first act was to climb the Vignemale. Presumably the mountain had by then become an overpowering fixation, and it is significant that he presented himself in celibacy. He wrote later that this was an "ascent of betrothal and the beginning of an eternal passion". In fact, every aspect of the Count's wooing and conquest of the peak resembled an ardent and complicated love affair. Acting as his man-in-waiting upon this momentous occasion was the guide, Laurent Passet, who accompanied him on many subsequent Pyrenean adventures.

Altogether Henry made thirty-three ascents of the Vignemale, the last when he was seventy years old. Many were solitary. On February 11, 1869, with two guides, he accomplished the first winter climb of the mountain. But perhaps the most revealing was the ascent of August 26, 1880. Then he spent the night on the summit in very curious circumstances. As daylight faded he asked his two peasant-mountaineer companions to dig a grave. When completed, the Count lay in it, wrapped in his sheepskin sleeping-bag, and gave orders for his burial. The men covered

him to the neck beneath a cumbrous layer of rock and soil, then descended to shelter some way below. It was Count Henry Russell's nuptial night, the consummation of his love for the Vignemale. At last he and the mountain were one.

But the peak proved to be an exacting mistress. The temperature dropped below freezing and the Count's grave and his exposed pointed beard were whitened with hoarfrost. What transports of emotion the captive lover experienced no one will ever know. For, to the outside world, he presented the episode in lighter vein, writing later: "It was impossible to catch cold, for I was cold the whole time—indeed, I was blue and frozen".

The reaction of the outside world to the eccentric Count has been interesting. He achieved limited but lasting fame as one of the original explorers of the Pyrenees. Although the Alps were already the popular playground of Europe, the great range dividing France and Spain was then unknown, unmapped and unvisited. Count Henry Russell and his English friend, Charles Packe, between them lifted the veil of mystery and presented a second European mountain Elysium to the increasing crowds of well-to-do pleasure seekers.

During his explorations the Count covered a large part of the Pyrenees and made sixteen ascents of hitherto unclimbed peaks. His pedestrian feats were prodigious, and he was called "Sir Henri Russell Killow-Mètre, le plus grand marcheur du monde". In his prime he would often dance all night before starting on a twenty- or thirty-mile walk at dawn. But, unlike the thorough Packe, he was frankly indifferent to science and made no observations in geology, botany, zoology or history.

The Count described his extensive high-altitude wanderings in a book, *Les Souvenirs d'un Montagnard*, published in 1888. He was bilingual, speaking French or English with equal facility. But it was in the liquid cadences of the former language that his brain and heart best expressed themselves. Emotions rather than cold facts dominate these "Memories of a Mountaineer". They glow warm with the author's life-long passion, and the book is a love story, none the less compelling because the heroine is a mountain.

Locally "Monsieur le Compte" became a legend, even during his lifetime. The simple folk of the remote valleys regarded him with awed respect. He was to them an exalted and mystifying personage whose purposes, however strange and beyond their divination, were necessarily wise. His love for the Vignemale was widely known but never understood. The French, however, are sympathetic to romance in any form. So the Syndicate of the Valley of Barèges in 1889 leased the upper part of the mountain to him for ninety-nine years, at an annual rental of one franc. By

this act the spiritual union of Count Henry Russell and the Vignemale was finally sanctioned by law.

Never out of sight of the Pyrenees, the Count wintered at Pau, at the northern foot of the range, and spent his summers on the heights. But he yearned for a closer and more constant intimacy with his adored mountain than was possible by means of mere climbing trips. He wanted to remain for days near the summit, where he could savor the changing moods and beauties of his Vignemale in sunshine and storm at all seasons of the year. But he would never desecrate the purity of the mountain's crowning glory of snow, ice and rock by erecting ugly stone or wood shelters. Only a grotto would be acceptable. He afterwards explained in the *Souvenirs* that a grotto might be the work of man, but it can be made to look like nature's own.

The site chosen for the first *grotte-refuge* was the wall of rock at the head of the mile-long Glacier d'Ossau. Its elevation is 10,520 feet, just south of the Vignemale's highest point. For two summers processions of peasants and miners carried food, wood, tools and explosives up the crevassed glacier from the village of Gèdre, more than 7000 feet below. At all times the Count was on hand to supervise the work. Through storm and calm, cold, wind and falling snow the labor continued, and in August 1882 the grotto was completed.

With the shelter problem solved, Henry's obsession grew. His sojourns at the grotto multiplied in number and length—three days, a week, ten days. Now he was able to live with his mountain day and night. His ardor also intensified, and soon one artificial cave was not enough. So there followed the nearby *Grotte des Guides* in 1885, and the next year the modest *Grotte des Dames*.

But in spite of his single-hearted devotion, Count Henry Russell was never ascetically inclined. He was no dour recluse. Nor did he show the least jealousy over the attentions others paid his mountain. In fact, they were proudly welcomed. He liked people and acted as cordial host to French and English climbers at his high-perched estate. Many a visitor told of the Count's hospitality, his fund of good stories, and of his tall military bearing, with steeply sloping shoulders which somehow increased his dignified appearance. In Henry's own words he had the "shape of a champagne bottle". The Abbé Pons said Mass in the grotto doorway before thirty worshippers kneeling outside in the dawn-reddened snow. The *Compte des Monts* and friends raised a capacious tent on the glacier. Persian rugs were spread, oriental incense burned, and white napery appeared. The guests banqueted on vintage wines and a huge *jambon de Bayonne*, followed by rare liqueurs and long Havana cigars. People came from all parts of Europe and the Count's grottos in the sky began to be known as a lofty place of pilgrimage.

But, as before, the lover's constancy was cruelly tested. In 1887 the glacier rose against the rock wall and buried the caves beneath solid ice. With a heavy heart the Count retreated to the foot of the glacier. There, at an elevation of 7900 feet, another large grotto and two smaller ones were hollowed out of the mountain. Called *Bellevue*, they never satisfied him, for his love was now nearly 3000 feet above him. Finally he could stand the absence no longer and resolved to carve his seventh and last grotto at the summit. The back-breaking work was again accomplished by the men of Gèdre in two seasons, and at last in 1893 the Count celebrated, in his own words, "the silver wedding" of his first ascent. This was his spiritual home until his death in 1909. He called it *Le Paradis*, either because it was so close to heaven or was a heaven on earth to him.

Today, just outside the village of Gavarnie there is a monument to Sir Henry Patrick Marie Russell-Killough. It was erected by his many friends and admirers, and stands at the entrance to the Cirque de Gavarnie, the Pyrenees' supreme expression of mountain grandeur. This simple marker is seen by hundreds of thousands of visitors and it serves to keep ever fresh the memory of a remarkable individual who lived strangely but not in vain.

So, such is the case history of a weird and aberrant romance between a man and a mountain. Here is certainly a treasure trove for psychophiles. Among its shining gems is the nuptial night on the crest; the involved symbolism of the Count's determined grotto penetrations; his otherwise puzzling unmarried state; and the possibility that at least two of the Vignemale's nine summit peaks from certain angles resemble the breasts of a reclining woman. But it may be that seeking a pathological interpretation is the wrong approach entirely. Some may be satisfied with the Count's own explanation.

In his *Souvenirs* he wrote: "A mountaineer is forever a lover of nature, especially when it has not been disfigured by humans". Perhaps this alone is reason enough for a man to fall in love with a mountain.

A TOUR OF THE WHITE MOUNTAINS IN 1883

by ELLEN T. CHEEVER

JULY 16, 1883. OUR MERRY PARTY was completed at the Barnard mansion in Franklin by the arrival of the Cheevers, Monday noon. The lovely weather and the prospect of spending a whole day in Plymouth, if we started Tuesday morning, made us decide to set off that afternoon. So, about three o'clock, a curious passer-by might have seen the whole Barnard family eagerly watching to see how five young ladies, three young gentlemen, three valises, two linen traveling cases, one shawl strap, one satchel, the camera, five umbrellas, four shawls, three overcoats and five jackets—not to mention small handbags, a linen duster, and a bag of cookies—could be stowed away into Mr. Kenrick's two carriages. The packing was successfully done, however, in spite of Mrs. Barnard's gentle sneers and a slight lack of faith in some members of the party.

"Father Barnard" sent us on our way with cheerful prophecies of thunderstorms, hail, cyclones and runaways; but nothing could have been more propitious than our first drive of twelve miles to New Hampton. Everyone was in high spirits; even our morose friend William wore his new straw hat at the angle which indicates "the acme of bliss". Our horses, Ned, Rhody, Topsy and Jenny, went finely. There was no dust, and convenient clouds kept the sun from shining too steadily upon us. The views grew more and more lovely as we drove on, and the charmingness of our situation so impressed us that we reached the Pinnacle House at New Hampton in a very hilarious state. Thomas and Charlotte gave us sad accounts of the undignified behavior of our little chaperon, Mrs. Pray, and the demure Gilbert. The other carriageful behaved themselves with great propriety.

While we were waiting for supper the ladies strolled through the grounds of the New Hampton Institute of Learning. Then

For this delightful account we are indebted to Marguerite D. Barnes (Mrs. Joseph H. Barnes) of Franklin, N. H., whose mother, Mary ("Mollie") Barnard, was one of the party. The other members were: Thomas A. Hine and his wife, Anna; C. Gilbert Hine, younger brother of Thomas; William Barnard and (Mrs.) Emma Barnard Pray, brother and sister of Mary; and Charlotte and Ellen Cheever. All were young people, mostly in their twenties; Mary Barnard, 24, had just graduated from Smith College, while her sister, Emma Pray, was three years older. Mary and Emma were veritable sylphs, weighing only 93 and 103 pounds respectively. Mary Barnard and Ellen Cheever are referred to in the account as "the infants", Mrs. Hine and Mrs. Pray as "the chaperons", and Thomas Hine and William Barnard as "the managers". In spite of the several allusions to sentimental evenings it may be mentioned that no marriages resulted from the trip.

The accompanying photographs were all taken by either Thomas or Gilbert Hine.

All footnotes are by the Editor.

Thomas called a business meeting on the piazza, and Gilbert was voted treasurer of the party. The secretary¹ had been chosen before we left Franklin. Our supper was a very nice one. It is especially to be noted that the young gentlemen ate freely of the delicious hot biscuits and did not suffer from dyspepsia afterwards. Someone suggested drawing lots for our seats in the carriages and, as a result, the four pairs of glasses shone forth together.

We started from New Hampton a little after seven and had a most refreshing drive of twelve miles in the twilight and moonlight to Plymouth. That glorious night was a most auspicious beginning for our journey; we only hoped it would not spoil us for any less pleasant days that might come. The night at the Pemigewasset House was very comfortable, and we were up bright and early Tuesday morning.

At eight o'clock we started from Plymouth. Thomas had Charlotte, Mollie and Ellen to take care of, while the two chaperons and Gilbert kept guard over William. It was cloudy at first and delightfully cool, but about ten the clouds burned away and it became bright and warm. Thomas stopped to take four photographs, and we took advantage of the rests to stretch ourselves and lie down in the hayfields. It grew very hot at noon, and coats and hats were at a discount. The young gentlemen had a realizing sense that the hour for dinner was at hand, and so we were favored with some groans from Thomas and some philosophical reflections from William.

At half-past one we came to the Flume House, and the groans and the philosophy gave place to eager preparations for dinner. No time was allowed for prinking, for we are indefatigable sight-seers; so, with demoralized collars and flying hairpins, we drove down the breakneck hill to the Flume. Those of us who had been here before found a tremendous change.² The great gullies full of huge rocks and uprooted trees look forlorn enough. Thomas and Gilbert took several pictures on their way. We ladies, accompanied by William, scrambled on ahead and planted ourselves in a row on a huge boulder, while Mrs. Pray perched opposite us on a rock more suited to her size. We nearly broke our backs, were melted by the sun, and devoured by mosquitoes, and William narrowly escaped being crushed by a falling boulder; but we were still able to smile while our pictures were being taken and then to scramble down from our lofty position. Mrs. Pray had to reprimand her young charge, Gilbert, for carrying on a violent flirtation with a young lady; but she soon spoiled the

¹ Ellen Cheever, writer of this account.

² The great Flume slide, which incidentally carried away the large boulder that had been wedged between the walls of the gorge, had occurred only a few weeks before, in June 1883.

effect of her scolding by encouraging him in the most frivolous behavior all the way back to the hotel. As it looked very much like a shower we added waterproofs to the party and walked down to see the Pool. The old man is still there, and recognized Mollie as a member of the Barnard family, but the boat has gone,³ so we stayed only a few minutes before beginning our weary climb up to the hotel again. It was very sultry and we were all glad to rest awhile before dressing for supper.

We were much amused to see how our personal property got distributed about. Just as we were lying down Thomas came to our door to bring Ellen's boots, and soon after William was heard wandering about the halls in search of his coat, which was hanging in our closet. Gilbert was the only gentleman who appeared in "biled shirt" and collar, and Thomas and William were under a cloud for the rest of the evening on account of their inferior appearance. We incurred Thomas's displeasure by making an ignominious entrance into the dining-room, so we had to make ourselves particularly charming to the gentlemen during the evening. We sat out on the piazza during the shower until we were all in danger of taking cold, in order that they might not have to finish their cigars alone; we made desperate efforts to converse entertainingly; and we played whist with the dear boys when we would much have preferred to go to bed. Thomas and Mrs. Pray beat William and Ellen very badly and, if William had worn his hat, it would have fallen to its lowest point. Thomas had to be sharply reproved for rattling the bones of his fingers as a gesture of despair. Our festive evening closed with a waltz, and we went to bed with the sound of rain to lull us to sleep and make us hopeful for the next day's weather.

The self-sacrificing secretary rose early to write, and was greeted by the sun coming over the mountain and the cheerful sound of William engaged in a war-dance in the next room. We were off at eight o'clock; everything was washed clean for our special benefit and the little mountain streams were swollen to their fullest extent. The drive through the woods was perfectly charming. We could hardly tell which were more lovely, the mountains by moonlight or the mountains in the early morning. Thomas took a picture of the Old Man of the Mountain. We had a delightful row on Profile Lake, and found at the head of it the young artist whom we had seen perched on a cliff in the Flume the day before. He seemed very anxious to show his pictures and invited us to come back in an hour.

³"For many summers an eccentric rural philosopher has lived here, in a rude boat, amusing visitors with his quaint speculations and original cosmogonies." (Osgood's *White Mountains*, ed. Sweetser, edition of 1884, p. 272.) See, further, F. W. Kilbourne, *Chronicles of the White Mountains* (New York, 1916), pp. 261-2.

At the Profile House we registered, had the horses cared for, weighed ourselves, and then found that we could not wait for the two o'clock dinner. So off we started again, stopping on our way for a glimpse of Echo Lake. Ellen drove for a while to let William rest, and distinguished herself by driving through all the mud puddles and over all the hummocks at a rapid rate and letting the horses run downhill at the risk of their knees and necks. After more pictures, and hosts of lovely views that could not be put into pictures, we reached Bethlehem and drove up in fine style to the wrong side of the Maplewood House. It happened to be the wrong side because William followed the advice of the infants, who, accordingly, were in disgrace for a season.

Dinner went off very successfully, William and Anna distinguishing themselves especially. Anna and Tom met some friends; indeed, Mrs. Pray and Gilbert are the only ones who have not been fortunate in this way. The Cheevers met a college girl at the Flume House and Dr. Fiske and his two pretty daughters at the Profile.

While the carriages were being made ready we sat on the piazza and read or wrote. William came up with the cheerful announcement that one of his horses was sick and the other was going to have the pink-eye. This was a little discouraging, but as they both seemed unusually inclined to go, and Rhody was able to be ugly, we decided that the hostler must have been a dismal croaker. There was very little change in our seats; Anna took the front seat in William's carriage and Mollie was transferred to Thomas's side. This last arrangement was a sad one for Gilbert who, having played sick all the morning, had been petted by Mollie until he was quite spoiled. So Ellen had a sorry time consoling him for his loss. William felt sleepy and depressed when we started, but his hat rose through all its possible angles until, by the time we arrived at Fabyan's, it was just balanced on the back of his head. We arrived in time to have our descent from the carriages watched by a Raymond excursion party of one hundred and forty, waiting on the piazza for supper to be ready. The ladies did not put on their good clothes, although William's face fell a degree when we suggested that it was not worth while. At this point we learned that Thomas had confided to William, at the Flume House the night before, that they had "a darned good-looking crowd of girls, by Jovel!" We discovered several Worcester people among the excursionists, while we were waiting about in the halls.

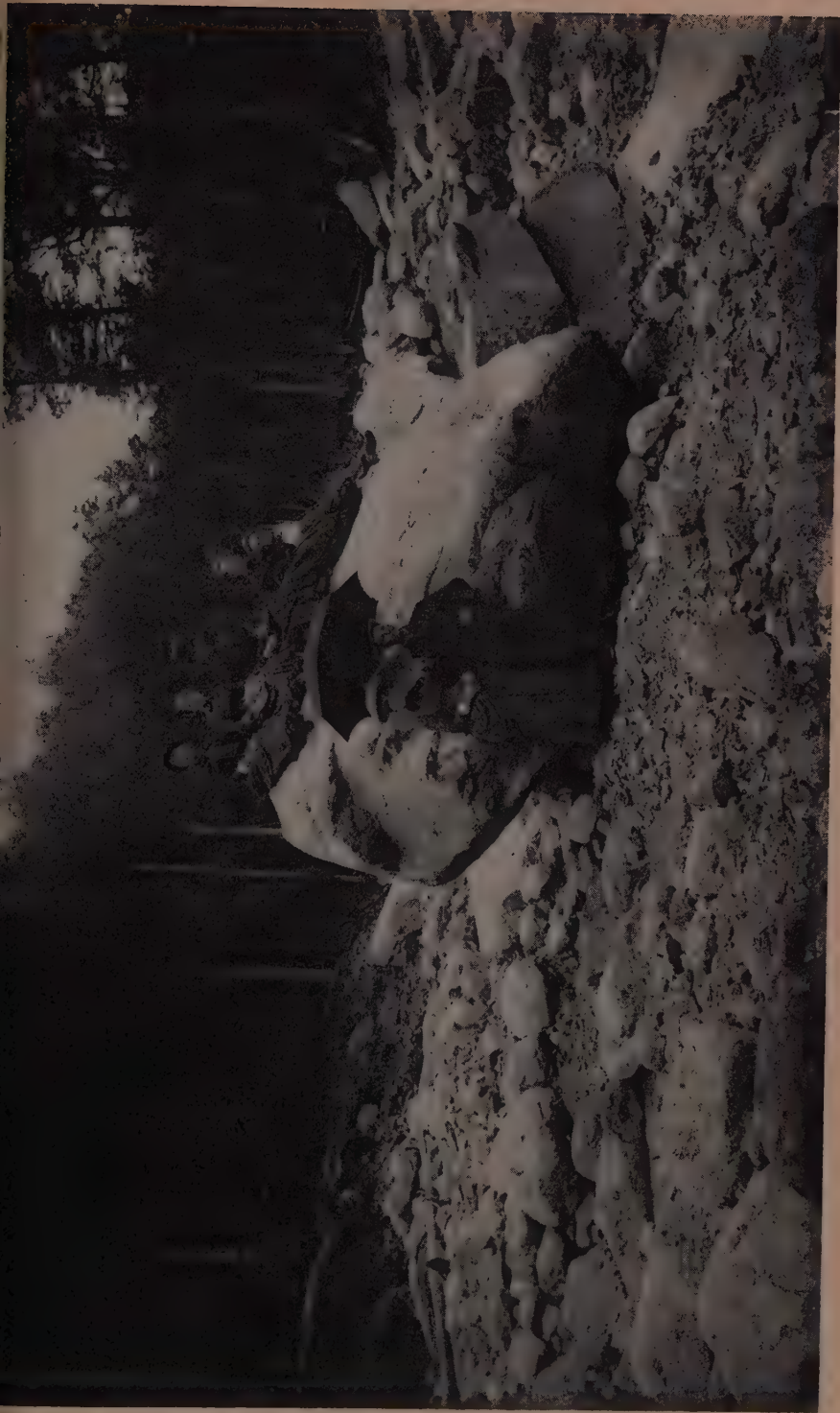
It seemed a pity not to avail ourselves of the little bit of moonlight that came through the clouds, so we walked up and down the limited promenade which the plank walk afforded. Bed seemed the thing next in order, and after a short stay in Tom and Anna's sumptuous rooms we said goodnight and had only a

few moments more of consciousness before waking in the morning.

We were waked rather early by the energetic excursionists, who walked about the hotel admiring the size of the corridors and wondering at all the new things they saw. William and Gilbert appeared with immaculate shirts, collars, cuffs and neckties, and a vast amount of complacency. Thomas kept us company in his flannel shirt. Tom worked himself into the good graces of our bright waitress and persuaded her to put us up a lunch for our trip up Mt. Washington. We decided not to risk our chances of having a dinner with a hundred and forty others and the "little boys" thought they could not wait till half-past three.

William found an acquaintance among the railroad men and was able to get our tickets at half price, to the great delight of our treasurer, not to speak of the unofficial members. It cannot be denied that, in spite of his few failings, William is a most excellent person to travel with. The conductor spoke to him on the way and seemed very sorry that we had bought any tickets at all. And we all sympathized with him. We were fortunate in getting seats together. The views were lovely as we began to ascend, though the clouds rested persistently over the tops of the high mountains. Inspired by Gilbert's example, William offered to wager with Ellen, two pairs of gloves to one, that we should have no view. As we came to some of the steeper grades the young men began to tremble, partly with fright and partly because they saw the clouds threatening to lift from the mountains, and remembered the money that they would lift out of their pockets. Just as we got off the train the worst fears of the young gentlemen were realized and we had a glorious view off toward the ocean. Gilbert plaintively remarked, as we sat on the rocks afterwards, that he could see gloves suspended from all the clouds.

Our lunch proved enough for a small army, but the gentlemen did what they could and Gilbert carried what was left in a bag to be ready for future use. Such a *young boy* would be likely to grow hungry again in a few hours! When Thomas sent a telegram to his "governor" the thermometer stood at 39 deg., pretty cold weather to be sitting picnic fashion on the rocks. But we enjoyed it while the view lasted and then went in to warm ourselves by the hotel fire. Here Mollie found a friend, "little Dodge" of Franklin fame. He greeted her most enthusiastically and Mollie told us afterward that he looked "real sweet". After a few minutes spent in writing postals and making an entry in the "log", we prepared for the downward trip. Here again we realized how good it is to have a "friend in court", as we seated ourselves in the tender of the first engine. The clouds lifted enough to give us magnificent views all the way down the mountain and we could not help feeling that this day, like all our others, had



IN THE PATH OF THE FLUME SLIDE OF 1883, ABOVE THE FALLS



been made for us. We were told that it had been the finest day of the season. Through a rift in the clouds we could look across a lovely vista of lakes, hills and valleys, and see the blue line of the Atlantic. Mrs. Pray did not enjoy our elevated position and not even Thomas's gentle care could make her breathe freely until we reached the foot of the mountain.

It did not take us long to make ready to start again and soon after four we were off, with fresh horses⁴ and clean carriages, on our way to the Crawford House. One of the showers that we had seen skipping all about the mountains during the morning descended on us just after we started, but it was a very dainty rain and we were sorry when quarter of five brought us to our hotel. Mrs. Langtry's car stands just opposite the hotel and Thomas caught a glimpse of the "Jersey Lily" as she was driving with her friends.⁵ We looked at her through Anna's field-glass but could not judge of her beauty at that distance. All except Tom and Ellen walked to Beecher's Cascade; Tom stayed behind in the vain hope of getting a picture and Ellen diligently wrote up the log. It was too cool for thin dresses and so the ladies appeared for supper in their demure traveling gowns. We found Thomas and William raging with hunger, but a fine supper produced a wonderful change in their manners.

After tea we sat in the parlor, listening to the music and watching the children dance, until the infants were so impressed with the beauty of the full moon that they dragged William and Gilbert out for a stroll. We had a blissful row on the little lake and then a walk down the road to the Notch. The other staid members will never know how lovely that moon was over the water and how bewitchingly it cast the shadows of the trees across our path. William was too happy to speak and the gentle Gilbert enthused till even the sentimental infants were satisfied. As we came back to the hotel Mrs. Langtry was sauntering on the piazza with her devoted Gebhard.⁶ We were disappointed in her. As far as we could discover by the moonlight, neither her face nor her figure was remarkably beautiful. She must be tired of hearing people whisper after her everywhere she goes. We all had a most comfortable night, and gathered around the open fire in the parlor at eight o'clock the next morning.

⁴ *I.e.*, refreshed horses.

⁵ Lillie Langtry (1853-1929), called "the Jersey Lily" because of her birth in the Isle of Jersey, was a notorious society woman, actress and beauty of the period. On her American tours she was accustomed to travel by private railway car.

⁶ Frederick Gebhard, a wealthy New York sportsman, whose uncertain relations with Lillie, over many years, were a constant cause of scandal. See *The Jersey Lily, The Story of the Fabulous Mrs. Langtry*, by Pierre Sichel (Prentice-Hall, 1958).

After breakfast four of us went to walk in one direction while Thomas, Gilbert and Ellen went to take a picture of Beecher's Cascade, which the others had visited the night before. They came back together, and then Tom and Gilbert left Ellen with the dowagers and children on the piazza while they went to take another picture; here she might have sorrowed alone if the other party had not appeared from Gibb's Falls and carried her off to Idlewild.⁷ From our lofty seat upon the cliff we saw Thomas and Gilbert, and they soon joined us in a sailboat. William was in a high state, full of classical allusions and very unclassical antics. As he fell over a stump he remarked that he was looking "*ad sidera*", not "*ad terram*", and some one reminded him that he would see *sidera* indeed if he were not more careful. Our next stroll was "*ad Merrillam Springam*", as William felicitously Latinized it. The walk through the woods was lovely and we drank some of "the best water in the world". We found a lovely little lake, upon which two of the "dear boys" were anxious to row us.⁸ While Tom was carrying about a Barnard, a Cheever and a Hine, William and Ellen had a falling out about a seat and William went in despair to drown himself. Anna flew to keep him company, but they both found themselves so comfortable sitting on the edge of the wharf under Anna's umbrella that they decided to live a little longer, and we had the view of their expansive backs for some minutes. Then the rest of us, with the exception of Mrs. Pray, went out in the boat, were run upon a stump by the valiant William, and afterwards photographed as a foreground for the lake.

We all were plunged into fits of melancholy as the time came to leave this charming place. William was so affected by this thought (and the realizing sense that it was dinner time) that Mollie and Ellen found him stretched out on the hard side of a log, looking as if life had no more charms for him.

After a very nice dinner at this delightful hotel we started on our drive through the Notch. The afternoon was lovely and the road was very wild. We met only one carriage during our whole drive of fifteen miles and it was fortunate we did not meet more, for the road was too narrow to pass comfortably. It was charming to drive through the "forest primeval", though the view of the Notch is much better from the railroad. At half-past six we came to Bartlett, where we had supper, such as it was. Here we saw the young pedestrians who had left the Crawford House that

⁷ "On the E. shore [of Saco Lake], at the foot of the mountain, and approached by a short path, is the pleasant bit of disciplined forest called Idlewild, which overlooks the lake and glen, and is provided with many rustic seats." (Osgood's *White Mountains*, as above, p. 149.)

⁸ Ammonoosuc Lake, about one-half mile N.W. of the Crawford House, between the railway and the highway, and draining into Crawford Brook.

morning. It must be recorded that during the drive through the Notch Thomas's carriage had a silent hour. It was his own suggestion that we should all "dry up" for an hour and a half. But when we took him at his word it did not suit him at all. For half an hour not a word escaped our lips, not even an exclamation when we met a team in the narrowest part of the road. Tom soliloquized most brilliantly for a few minutes and then subsided with the expressive remark that he should think he was driving with a corpse through the woods. When at last the other carriage overtook us, Thomas jumped out with a very strong exclamation, rushed up to William, and made him go and drive the first carriage, declaring he could not stand it any longer. Let Thomas learn from this painful little experience not to make proposals which he is not prepared to see carried out.

Our evening drive was not quite such a success as the sentimental infants had fondly hoped it would be. Thomas's supper had not been all that he could desire, he had not had his usual smoke, and he did not like the prospect of driving by moonlight as well as did his more irresponsible companions. Indeed, as he happily expressed it, "he had a worm", and there was no cure for it but a good cigar and a night's sleep. So we left him severely alone and tried to enjoy our moonlight and the lovely air. Unfortunately, or fortunately, according to the different points from which we looked at it, we missed the turn in the road which would have taken us to Jackson and kept on and on in a state of pleasing uncertainty as to our destination until, about half-past nine, we came to the village of North Conway. We stayed overnight at the Kearsarge House and had a most abominable breakfast the next morning. Thomas vented his wrath upon the clerk and, as a result, \$4.00 was deducted from our bill.

It was lovely the morning when we started a second time for Jackson, though it grew quite hot as we went on and we found the Conway roads rather dusty. This made us decide to stop here for dinner and not go on to the Glen House till late in the afternoon. Jackson proved to be all that could be desired. We all decided to come here sometime and spend a month at the Thorn Mountain House, a little gem of a hotel built in Queen Anne style. Dinner here was delicious and doubly comforting after the morning's experience.

We took our writing and our books and had an hour of perfect bliss under the pine trees by the side of Jackson Falls, the place where artists love to resort, as the guidebook tells us. Mrs. Pray, poor little dear, had a sweet nap and woke looking as bewildered and pretty as a baby. We all got delightfully cool and rested.

After dinner we adjourned to the pretty parlor, where we found some music and a lovely grand piano. Ellen discovered the Moonlight Sonata and some Chopin waltzes, and made bold to

try them over. After she had laid the music aside and had begun to play without her notes, Miss Maud Leland, hearing a rival, sailed into the room and with great *impressement* bore her portfolio away with her. As this little maneuver did not stop the playing she tried another tack and led a small troop of boys and girls into the room in the hope of drowning out the music. It gave us no small pleasure to watch this amiable young lady, who was evidently afraid that we were going to stay and cut her out.

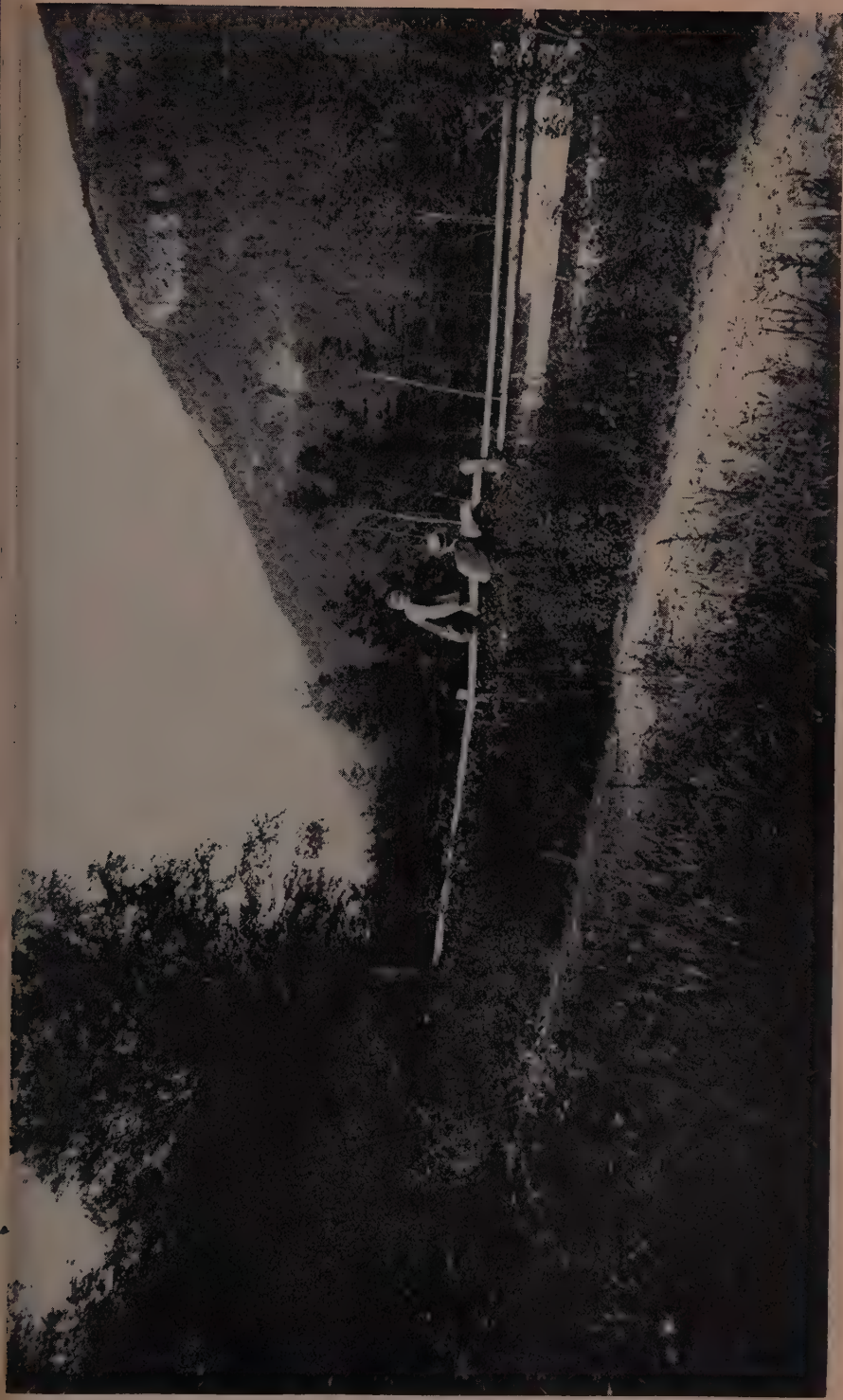
The drive to the Glen House was charming. Gilbert and Thomas entertained Mollie and Mrs. Pray with their choice repertoire of songs and in the other carriage William was ridiculous enough to keep us in a gale of laughter. As we stopped to water the horses the young men invested in some spruce gum and for a short hour we were happy children again. We repented at our leisure, for the horrid stuff clung to our teeth for the rest of the afternoon. We drove up to the Glen House in fine style, about half past six, and fell in love with the place at first sight.

The view of the mountains from the piazza is grander than any we have had before. Madison, Adams, Jefferson, Clay and Washington stand out in a most imposing line against the sky. The clouds were lovely all the evening and when the moon rose the lights and shadows on the mountains were entrancing.

The music that was sent for had arrived before us and we made a melancholy attempt to have some duets. The poor girls who played were almost paralyzed with fright and then overwhelmed with mortification at their miserable failure.

On Sunday our wonderful good fortune in weather was proved again. It was quite close to sultry, but as we did not feel obliged to do anything special, the heat gave us no trouble and allowed us to come out in our good dresses. Anna electrified us by appearing in an organdie which looked as fresh as if it had just come from the laundry, and all the gentlemen were resplendent in white shirts. In the morning we toiled up a tremendous hill under the delusion that it would be charming to write and read in a little pavilion which we spied from the hotel. But we found it previously occupied by the mosquitoes, so we took our weary way back and contented ourselves with the piazza. Anna and Ellen slept for an hour before changing their dresses for dinner. That Sunday dinner was something to be remembered. We sat at the table nearly two hours. In fact, we spent the greater part of our day in that dining-room. It was after ten when we rose from breakfast, four o'clock before we left the dinner-table, and half-past eight when supper was over.

The boys were rather uneasy during the afternoon and vented their Sunday naughtiness in teasing the young ladies while they were trying to write. Just about tea time a shower came up and give us some grand clouds to watch. In the evening, while we



LOOKING UP THROUGH CRAWFORD NOTCH



LAKE AMMONOOSUC



THE PARTY

Standing: Ellen Cheever, William Barnard. *Seated:* Charlotte Cheever, Molly Barnard, Gilbert Hine, Emma Pray, Anna Hine.

were all sitting around one of the tables in that huge parlor, a young lady came up and said that she had heard us play the evening before and thought, perhaps, one of us would be willing to play for them while they sang hymns for a little while. So Charlotte went to make a martyr of herself for the sake of "Rock of Ages" and "Coronation". After a while the music ceased and we beheld Charlotte turning around on her stool and talking in a most confidential manner with the young gentleman who had been persistently off the key during all the singing.

At the Glen House our pride was taken down a little when William reported that the barber took us for a crowd of "school-marms", on account of our glasses. He was very inquisitive and asked if we were all single. When William told him that three of us were married he looked perplexed and then decided that one must be a widow. So Mrs. Pray was dubbed "the widdy", then and there.

Monday morning Thomas thundered on our doors at the unearthly hour of six o'clock, and after a seven o'clock breakfast we were off for Tuckerman's Ravine. We drove three miles down the road⁹ from the Glen House and left the horses while we clambered up the two miles and three-quarters to the ravine. It was a terribly rough climb and if it had not been a magnificently clear, bracing day we should never have lived to tell how hard it was. Mrs. Pray remarked that the ravine was rightly named—that it was quite enough to "tucker-man out". But the "leddies" plodded on bravely in spite of their troublesome skirts and William's doleful predictions. It was a little curious that on the way down *he* should feel dizzy and ill, while the rest of us were comparatively fresh. We considered it a judgment upon his boastfulness and yet we could not withhold our sympathy and anxiety. The gentlemen all went up to the snow arch; but the wind blew so fiercely and the path was so rough that we had to be content with looking at the snow from afar and feeling of the ball of ice that William brought back for a trophy. It was nearly three o'clock when we got back to the horses and some of us were almost faint with hunger. We thought ourselves very fortunate to come down safe and sound; turned ankles, weak knees and lame backs were the merest trifles compared with what might have befallen us. We were all agreed that once in a lifetime was sufficiently often to visit Tuckerman's Ravine.

Dinner at the Glen House refreshed us wonderfully. William played invalid part of the way to Jackson and was fed with sugar and brandy on the back seat, while Anna drove his horses.

The proprietor of the Thorn Mountain House received us

⁹ *I.e.*, southward, toward Jackson—to Pinkham Notch.

with open arms, and a "Well, children, how are you today?" We felt so rested after our lovely drive and our nice supper that we sat for some time on the piazza, and William and Mrs. Pray had a waltz. Charlotte overheard a young girl say: "I wonder who that eye-glassed pair are. They waltz so stiffly that you can hardly see any motion at all." We were afraid that our talents are not appreciated by the guests of the Thorn Mountain House. The chaperons and the dignified members found themselves sleepy pretty early and the infants were left to entertain "Cousin Tom" and "Brother Will". The poor things trembled at the thought of the sarcasm awaiting them in their rooms, but they felt it their duty to stay by the dear boys, especially as Thomas expressed a desire to see the moon rise. Even a suspicion of sentiment from him must be cherished at any cost.

It was quite entertaining to watch the friends come downstairs to breakfast the next day. It seemed best to us all, in view of the stiffness of our joints, to take our books out by the Falls for the morning. The little hill which we had to ascend seemed more formidable to us, in our dilapidated state, than Mt. Washington had looked the day before. But when we were comfortably settled on our shawls, under the pines, we forgot all our woes and for two hours were supremely happy. To be sure, William was nearly thrown into a fit of hysterics by being trampled upon by several strong-minded females, just as he had fallen into a sweet sleep, and "Widdy Pray" sat down on an anthill. But these little incidents only added to the general happiness. Some Worcester friends came down upon the secretary, as she was sitting apart and writing in the log.

Another good dinner and then we were ready to leave again this charming little hotel. As we were packing ourselves in, one of those amiable young ladies was overheard to say: "Well, if those people had as much baggage as we have, I guess they wouldn't get into those carriages."

The drive back to North Conway was very hot and dusty and, after a losing race with a saucy one-horse buckboard, our harnesses and horses, which had looked so bright when we started, were in a sorry plight by the time we reached the village. The Cheevers made a call on some friends, while the other carriage stopped to water. As we left North Conway we turned our faces away from the mountains and realized that we were on the way home. When we came to a guide-board with "Glen House" on one side and "Concord" on the other, William's hat sank till it nearly eclipsed his nose and we all set up a dismal wail. That guidepost had a very baleful effect on the rest of our journey. Our remarkable good fortune deserted us at that moment. The dust grew thicker and thicker and the heat more oppressive.

Our supper at the Conway House, our somewhat uncom-

fortable night, and our wretched early breakfast seemed to affect the general health unpleasantly. At the close of the day it came out that Mollie had been bearing a headache all day long and that Thomas had been feeling sick ever since morning. William too, poor boy, had suffered without sympathy from a miserable headache, because the day before he had deceived us all in the hope of being mesmerized. So much for making false pretences! Then the list of things lost was swelled to a discouraging extent. The "widdy's" rubbers were found missing, William discovered that his overcoat had been left behind, and Gilbert's straw hat slipped out of the carriage. We started off so early in the morning that at quarter of eleven, when we reached Tamworth, we felt as if it were an hour or two past dinner time. Part of us spread shawls on the grass in front of the little tavern and went to sleep in various graceful attitudes. William talked in his sleep on the big sofa in the parlor, Charlotte snoozed in an easy chair, and Ellen wrote in the log and kept watch over them all.

After dinner, which was a good one, Thomas was put under treatment for a headache and he was soon soothed to sleep. It was very hot when we started off at two o'clock and our trials began again. We had to turn back for Ellen's jacket and were obliged to go two miles out of our way to get Rhody's shoe put on. We were completely covered with dust and quite sweltered when quarter of six brought us to the Senter House at Centre Harbor. As we left Chocorua and the last of the White Hills behind us, we degenerated rapidly. No special effort was made to conceal our yawns and the front seat collapsed so far as to put their feet up on the dashboard. We came to the conclusion that we were all getting pretty well acquainted with each other. We "leddies", especially those of us who have no brothers and no husbands, have gained many points on the subject of gentlemen, and the young gentlemen say that they have learned ever so much about girls. We shall know just how to treat each other on another trip of this sort. It is quite evident that we were made to travel together and we have already planned a yachting excursion for next summer. Indeed, we have gone so far as to decide that we shall start from Boston, go to Nantucket, and cruise around in the Sound for two weeks. Mr. Ned Hine is to be captain, and Tom caterer. Then we are to have a cook, and a man to do the disagreeable work. We ladies are all going to have two yachting suits in our next summer's wardrobe.

Two letters from Miss Nesmith were waiting for Mollie at Centre Harbor and, after our tempers and our spirits had been improved by a change of dress and a good supper, we sat on the piazza watching the beautiful sunset and the pretty children, while Mollie read us the news from Franklin. We strolled down to the shore of the lake for a little while and then, after a rather

mournful attempt to keep up a conversation, we decided that bed was the best place for our stupid heads.

Thursday was another of our lounging days. This time we took boats and rowed along the shore of the lake till we came to a pleasant little pine grove, where we laid ourselves out in Jackson style. Thomas took two pictures of the group, in which we shall all look as stiff and unhappy as possible.¹⁰ William and Charlotte went out for a little row, Ellen took a nap, and Thomas, Mollie, Gilbert and Mrs. Pray amused themselves by scratching each others eyes out, literally and metaphorically. We spent the afternoon on Lake Winnepesaukee, continuing our lounging on the deck of the *Mt. Washington*. Nothing memorable was said or done, except that Mrs. Pray embarrassed a poor young man by gazing steadily at his feet, which were very large, until he withdrew around the corner and examined them to see what could be the matter. It is noticeable that our days grow less and less interesting the nearer we get to Franklin. By the time we are at home again we shall believe ourselves very commonplace people after all.

Our last evening was full of rather melancholy reflections. We sat on the piazza in our good clothes, watched the children dance, waltzed, and smoked until it was time to prepare for an early breakfast the next morning.

Here we are at our last stopping place, the Eagle Hotel in Laconia. We are greeted on our arrival by a suffocating smell of tar and a serenade from the village band. The drive this morning was very pleasant, although the quiet country views were quite a contrast to the grand mountain scenery that we have left. The morning was as beautiful as any we have had and exclamations of surprise, delight and gratitude were again in order. We certainly ought to send a vote of thanks to the weather bureau for the perfect weather that they have furnished us.

(*Franklin.*) Our dinner [at Laconia] was not a success if compared with our memories of the Glen House, but we managed very well and got no small amount of amusement out of the dashing waitress. The way in which she shouted in our ears "steamed berry pudding, berry, mince and *currant* pie", with an air of making a great concession when she came to the "*currant*", nearly convulsed us.

The sight of horse-railroad tracks and other signs of city life oppressed us tremendously. All the rest of the way home, fourteen miles, we grew sadder and sadder. But our triumphant entry into Franklin cheered us, and we drove up to the Barnard mansion

¹⁰ See the photograph reproduced herewith.

in the same merry spirits in which we had left it twelve days before.

It would seem eminently fitting to close this rambling, inadequate account of our journey with a unique poem. But even the grandeur of the mountains, the beauty of the clouds, and the loveliness of the moonlight have not had power to bring any of us into a poetical mood. So, in the plainest of prose let it be said that we have found our managers most competent, our treasurer most faithful, our chaperons all that could be desired, and our traveling companions in every way delightful. We are all thankful to come home so well and happy from the trip, which has been unanimously declared perfect. So our secretary closes the log, such as it is, and signs herself,

Faithfully yours,

ELLEN T. CHEEVER

EXPENSE OF THE TRIP

[Eight Persons]

July 16	Suppers at New Hampton.....	\$ 5.00
July 17	Night and one meal at the Pemigewasset House.....	16.00
July 18	One day at the Flume House.....	37.00
July 18	Dinners at the Maplewood House.....	13.00
July 19	One day at Fabyan's.....	39.30
July 19	Tickets up Mt. Washington.....	24.00
July 20	One day at the Crawford House.....	43.00
July 20	Suppers at Bartlett.....	6.00
July 21	Night and one meal at the Kearsarge House.....	16.00
July 21	Dinners at the Thorn Mountain House.....	10.50
July 23	Two days at the Glen House.....	85.50
July 24	One day at the Thorn Mountain House.....	34.00
July 25	Night and two meals at the Conway House.....	18.00
July 25	Dinners at Tamworth.....	5.00
July 26	Tickets on Lake Winnepesaukee.....	8.00
July 27	Two days at the Senter House.....	50.00
July 27	Dinners at Laconia.....	5.00
July 27	Fees and small expenses of trip.....	8.00
July 27	Horses	120.00
Total		\$543.30

A CLIMB IN THE VENEZUELAN ANDES

by NATHANIEL DAVIS

VENEZUELA IS MORE WIDELY KNOWN for the oil under the steaming waters of Lake Maracaibo than for its snow-capped mountains. Nevertheless, one last finger of the Andes reaches across the Colombian border and provides Venezuela with the Sierra Nevada, or Snowy Mountains. According to an ancient Indian legend (recounted by Tulio Febres Cordero) this range was once like all the other brown and snowless peaks except that it was the home of five white eagles. The woodland spirit Caribay coveted the eagles' gleaming feathers and followed them up the steep mountains toward the moon. When she touched the birds, they turned to ice and scattered snow on the peaks of the Sierra Nevada. Even now the storms in the mountains are said to be the struggles of the eagles and the wind is Caribay's mournful lament.

The two highest peaks in the Sierra Nevada substantially exceed 16,000 feet. On a shoulder of the first, Pico Bolivar, the Venezuelan government has built the highest cable-car in the world, rising to an altitude of 15,600 feet. The second, Pico Humboldt, supports only a glacier; and this was the mountain Bill Babcock, a Y.M.C.A. official here in Caracas, and I elected to climb last Easter.

Humboldt is not a particularly difficult mountain, as the only two possible problems it presents are getting over a "Red Wall" which forms the headwall of a cirque below the glacier, and getting up the lower slope of the glacier itself—for which crampons are needed. Local climbers without good boots solve their problem by scrambling up the friction pitches on the Red Wall in sneakers (on a dry day!) and then strapping on crampons over their sneakers in order to traverse the glacier. They also claim to carry little more than a jar or two of honey as food, on the theory that you lose your appetite anyhow.

Not Babcock and Davis. As we started up the mountain from the Forestry Station at Mucuy, each of us was carrying about sixty pounds of sleeping gear, emergency supplies, clothing, cameras and canned goods. (An order of dehydrated food from the United States was destined to arrive on the day after we started on our trip.) We also had ice-axes, assorted hardware and enough rope to lower a hippopotamus down the East Face of Longs Peak.

NATHANIEL DAVIS, a life member of the Club, is a U.S. Foreign Service Officer, at present stationed in Caracas. He has walked and skied in the Tatras, the Riesengebirge, the Alps, the Appennines and the Caucasus; while here at home he has joined the New York Chapter in canoe trips on eastern and western rivers.

This last item constituted Bill Babcock's solicitous provision for my ineptitude, on the theory that we should undoubtedly fall behind schedule and might save time by rappelling down the rock faces on our descent. As it turned out, time did become an important factor, since we missed the end of the December-April dry season by about four days. This meant that clouds tended to close in at ten or eleven o'clock. Nevertheless, there were clear early mornings and starlit nights.

On our first day we climbed about 5000 feet up a forested valley. Tropical vegetation, moss-covered trees and myriads of orchid plants surrounded us. The Coromoto Creek plunged below, as the trail, a broad burro path, switched back and forth up the mountainside. We lunched at a tin-roofed, well-built refuge hut and spent the night at a second, which overlooked a sparkling lake.

On the second day we continued up our valley, which by this time had become a rocky, cliff-lined ravine with jagged peaks on either side. They reminded me of the Sawtooths in Idaho. Our path was still wide enough to suggest the landscaping of the Gulf-side Trail, a dean of the Forestry School having apparently been the Andean Edmands. The most harrowing traverse of the whole trip was over a walk-way of planks along a cliff face in this valley. The boards, slimy with moisture, were supported on lengths of pipe driven into the rock. The pipes were loose and the whole board-way swayed and sank under foot. Except for this feature, however, the A.M.C. would have been proud to claim the trail.

At the head of our valley we passed a waterfall and came upon Lago Verde, a deep-green lake about half a mile across, beyond which Humboldt's peak and glacier shimmered in the sky. We had to work our way around a rocky outcropping on the north side of the lake and walk down into a tributary valley, where once again the landscape changed. Here the ground was largely bare soil and gravel except for large clumps of mountain grass which grew a foot or two apart, giving the valley the look of a tufted bedspread. It was here that the trail gave out, and we camped.

The following day we started our glorious ascent, only to find, when we had got most of the way up to the glacier, that we were climbing up the wrong valley. The small lake we had been told to look for wasn't there, and so we descended and followed another stream toward what looked like a complete dead end. The stream, however, wound through the seemingly unbroken cliff face, and we found a whole new valley curving up to an unmistakably authentic Red Wall and a broad saddle of glacier. We even found our lake, this one a milky glacial pool, and camped beside it.

On the fourth day we climbed the Red Wall, found we were too far over to the side, came down, went up again, and then saw the clouds come in. In a rather disconsolate mood, since we had to return to Mucuy on the following day, we returned to camp and slept an hour or two. Bill woke me up at noon, however, to tell me that it was clearing. So up we went again and across the glacier. The clouds were swirling up out of the valleys, but the sky was blue and the sun shone. At four in the afternoon we scrambled up the few rods of rocky peak above the glacier, congratulated each other, drank some grapejuice, and started down. We reached camp at 5.20, after what might be regarded as one of the slower ascents and faster descents in the history of Humboldt Peak. Our expected loss of appetite having totally failed to materialize, we broke out our regular supper plus our emergency rations and had a celebratory meal.

The following day we retraced our steps down the mountain, reaching Mucuy without difficulty at about four in the afternoon, somewhat tired and in my case slightly blistered. There we returned the keys for the refuge cabins to an amiable caretaker and trudged five miles out to the Merida road, where a dump truck obligingly gave us a lift to town. Pico Humboldt had been climbed—as it had been many times since it was first scaled in 1911.



PICO HUMBOLDT

FROM THE TOP STATION OF THE MERIDA CABLE-WAY

Photos by Nathaniel Davis

PICO BOLIVAR





THE RED WALL LEADING TO THE GLACIER
Pico Humboldt

Nathaniel Davis

THE LOGGING RAILROADS OF THE WHITE MOUNTAINS

by C. FRANCIS BELCHER

PART V: EAST BRANCH AND LINCOLN RAILROAD (1893-1948)

HERE IS THE ONE LOGGING LINE which today is closer to more memories and dearer to more hearts than all the other White Mountain carriers put together. The EB&L, as it was so frequently called by customers and rail fans, has earned this fine reputation honorably and faithfully—over a longer period of years in the biggest section of these mountains. Its esteem came primarily from its masters, the lumber barons, but it was also held in high regard by trappers, itinerants of all types, lumberjacks from most everywhere, foresters, peddlers, trappers, fishermen, conservationists, hunters, excursionists and even prying critics. These and many more have been served by this back-country line at one time or another over a lifetime of more than fifty years.

There is reason for this widespread esteem in the fact that the home of the EB&L was a virgin paradise full of fish, animals and adventures then as well as now. Not only was it the largest single tract in the White Mountains to be logged by rail, but also its valleys were deeper and wider, its shoulders broader and richer, and its spruce and fir as well-aged and full of board feet as any other land unit in these hills. Once the EB&L was there it was a natural attraction to more than lumbermen. Now the bulk of the original cover is gone. The railroad is gone. The Pemigewasset wilderness, the locus of our story, is still there. Memories of the dramatic times of the East Branch & Lincoln R.R. will persist longer than those of the rest of its contemporaries and are worthy of closer examination.

LINCOLN, N. H.

On to Lincoln it was in 1892 for J. E. Henry, his sons, and many of their Zealand workers and families. The Pemigewasset lands were now theirs. A railroad from the outside world had been built to North Woodstock, a mile or so away. What was Lincoln like before their arrival? Eastman's *White Mountain Guide* (1867) said: "Woodstock and Lincoln are small towns, of no particular note". Sweetser's *White Mountains* (1876) mentions

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it only by inference: "The stage now sweeps through the scattered farmhouses of N. Woodstock, and soon passes the point (on the r.) where a side road diverges to Pollard's and the Pemigewasset forest". Henry C. Waldo in *A Short History of Lincoln*, previously referred to in Parts III and IV of this story, states that in 1890 "there were twenty-eight names listed on the resident tax payers roll". The late Senator George H. Moses, in an article entitled "Pullman, New Hampshire: A Lumber Camp", in the May 1895 issue of *The Granite Monthly*, offers the following description: "On the first of September 1892 the spot where now this village [Lincoln] stands was a dense and virgin forest, which, in common with nearly all the country within sight from any adjacent coign of vantage, had just come into the possession of Messrs. J. E. Henry & Sons, whose gigantic lumber operations in the Zealand Valley had reduced the supply of 'raw material' there and had driven them to seek newer and more original fields".

Actually what is now the center of Lincoln was in 1892 known as "Pollard's", the site of a mountain lodge where up to twenty guests were put up for a dollar a day and where adventurers interested in visiting the great wilds of the East Branch could get the excellent guiding services of Dura Pollard for a nominal additional fee. At that time Pollard's was too close to the wilderness for most of Lincoln's residents, who chose to live along the Franconia Road. Messrs. Henry & Co. would once again pioneer when they set up shop near Pollard's in 1892.

The new Lincoln did spring up quite suddenly in the midst of the forest. George Moses, in his *Granite Monthly* article, speaks interestingly of this period:

Pullman, New Hampshire—you may not find it on your map; you may not mail a letter to that address and have it delivered; no enterprising scalper may sell you a reduced railroad ticket to that destination; yet it exists and there is some basis of fact for my fancy in thus titling the lumber town of Lincoln on the East Branch of the Pemigewasset. . . .

But this is digression. On the first of September 1892, let me repeat, where now stands the lumber town of Lincoln was a dense, virgin forest. A year later the village of Lincoln with a school, store, dwellings, shops and mills was visible evidence to all. It had sprung up almost in a night through the boundless energy and unflagging courage of its owners, who in the face of a steadily falling market, deepened their investment and increased their risk.

From the more personal position of a Henry worker, Jim Doherty in an article in the April 1955 issue of the *Northeastern Logger* is quoted on his recollection of his first days in Lincoln:

That day in August 1892, we drove over from the other side, down through the notch. There was quite a party of us, Mr. Henry and his sons George, John and Charlie, Jim Ward, Jim Boyle and his sons,

Henry, Billie, Joe, Abe, Jack and Charley, and myself and perhaps some others whom I do not now remember. Then there were the womenfolk and the children. . . .

Well, the day after we got here we all went to work clearing land, building houses and putting in a railroad. . . . During the fall we had 100 to 150 men working and by winter we had finished six houses, a store, a barn, a blacksmith shop and a harness shop. Besides that, we had cleared a lot of land, and made a start on the railroad, so that by March, two miles of railroad were finished and the logs started rolling into Lincoln. Then a portable sawmill was set up and the lumber sawed for more houses which were built along Main Street and for the big sawmill which in a few more months was completed and was turning out a hundred thousand feet a day of sawed lumber.

During those first months, the women and children stayed in the farmhouses and the rest of us in tents or any other place we could find. The "Old Man Himself" slept on a mattress on the floor of the harness shop.

It was a hard winter, that first one—four or five feet of snow and lots of cold weather. The houses were little more than shacks, but we were all packed in so tight that everyone managed to keep warm.

While the original inhabitants of Lincoln may have accepted their new townsmen quietly, their tourist-catering neighbors in nearby North Woodstock were not too happy about the changes taking place at Pollard's. Note the following excerpts from *The White Mountain Echo* in 1893 and 1894:

Can it be that this fair region is to become as sad a scene of desolation as that which Zealand Valley now presents to the eye? (Aug. 4, 1894.)

The wealthy lumber king has been among us a year and has his work of devastation well under way. He is not a lumberman, but a wood-butcher, a mutilator of nature, a destroyer of the property of a thousand for the benefit of himself. The bare unsightly sides of Black Mountain, the dwindling streams and barren slopes of Coolidge, all testify against him. (Aug. 11, 1894.)

Early on Saturday morning the party [American Forestry Association] proceeded by the Pemigwasset Valley Railroad to North Woodstock, whence they continued by a special train to the lumber camps of the Messrs. J. E. Henry & Sons at Lincoln, where they were presented with an object lesson of not the most pleasing character. (Sept. 1, 1894.)

J. E. Henry's roots grew quickly into the rich Lincoln soil. As they did, his organization became increasingly efficient in the operation and control of the new company town. The whole settlement was his—the homes rented to workers originally for about \$10 a month (and carry your own water from a common water barrel), and the company store that sold all things to all hands (one of the first units built and operating—for years without competition). J.E. himself was the local judge; son John was appointed the first postmaster of Lincoln in 1902. They built their own

hotel, the Lincoln House, in 1903; electricity when introduced came from "The Company" and ice from the corporate Ice Pond, much of which is still in evidence a stone's throw off the Wilderness Trail just beyond the Black Pond Trail. A company hospital was later built and hospital insurance was offered to workers and families for 50¢ a month, with the management making up the difference. And annually, at Christmas, all loyal employees and their families were given baskets of turkeys and other goodies by the all-providing management.

In his article in the *Granite Monthly* George Moses has the following observation on life in 1895 in "The Grand Duchy of Lincoln":

It is not a perfect community by any means, yet it is superior in all its managerial features. This is a necessary fact because the town is designed to supply the needs which were purely managerial. . . . The government and discipline are, as one might suppose, intensely paternal and the administration is most rigid. The old town of Lincoln, what there is of it, lies off to the west from "The Grand Duchy", and the population is aligned along the highway leading northward to the Franconia Notch. The selectmen and other town officials are therefore chosen from among the older inhabitants, and "The Grand Duchy" is left almost wholly to its own devices, the Grand Dukes making and enforcing whatever regulations they deem necessary to the peace and dignity of their grand ducal estate. Prohibition is the rule in our Pullman, and it does prohibit. No man eats unless he works, on the true theory of Captain John Smith, and the lords of the realm themselves are most exemplary in their obedience.¹ The labor accomplished daily by the Henrys, father and sons, comes nothing short of Herculean. "The Old Man" Henry, as he is known from the Pemigewasset to the St. Lawrence, has lived a life of almost unrelenting toil, and the dignity of labor is a family tenet with him. What he has accomplished by the way of accumulated lands and fortunes is the result of his personal efforts and is not likely to diminish from lack of attention. . . .

The opportunities which the owners of this property possess are numberless in almost every direction, but I need not enumerate them all. When one recalls that the number of hands employed in this New Hampshire Pullman are many times as numerous as the entire body of original inhabitants and that they are dependent for everything upon the inclinations of the owners of the village, the possibilities by way of politics are highly suggestive. And when one thinks of the agitation for the preservation of the forests of the White Mountain Region among whose foothills this forest lies, there is suggested the boundless opportunity which the Messrs. Henry have of demonstrating how to use and at the same time to preserve the valuable growth.

¹ This is further borne out by the following description of Lincoln printed on the back of passes issued to workers by the Henry Co.: "Lincoln, N. H. is one mile from the town of North Woodstock on the Concord & Montreal Railroad. It is the headquarters of the J. E. Henry & Sons Lumber Co., one of the largest firms in the state. A good man can find work all year. A poor man better not go there, as such men are not wanted."

In politics the Grand Dukes of Lincoln are making no move, but in forestry they are doing something.

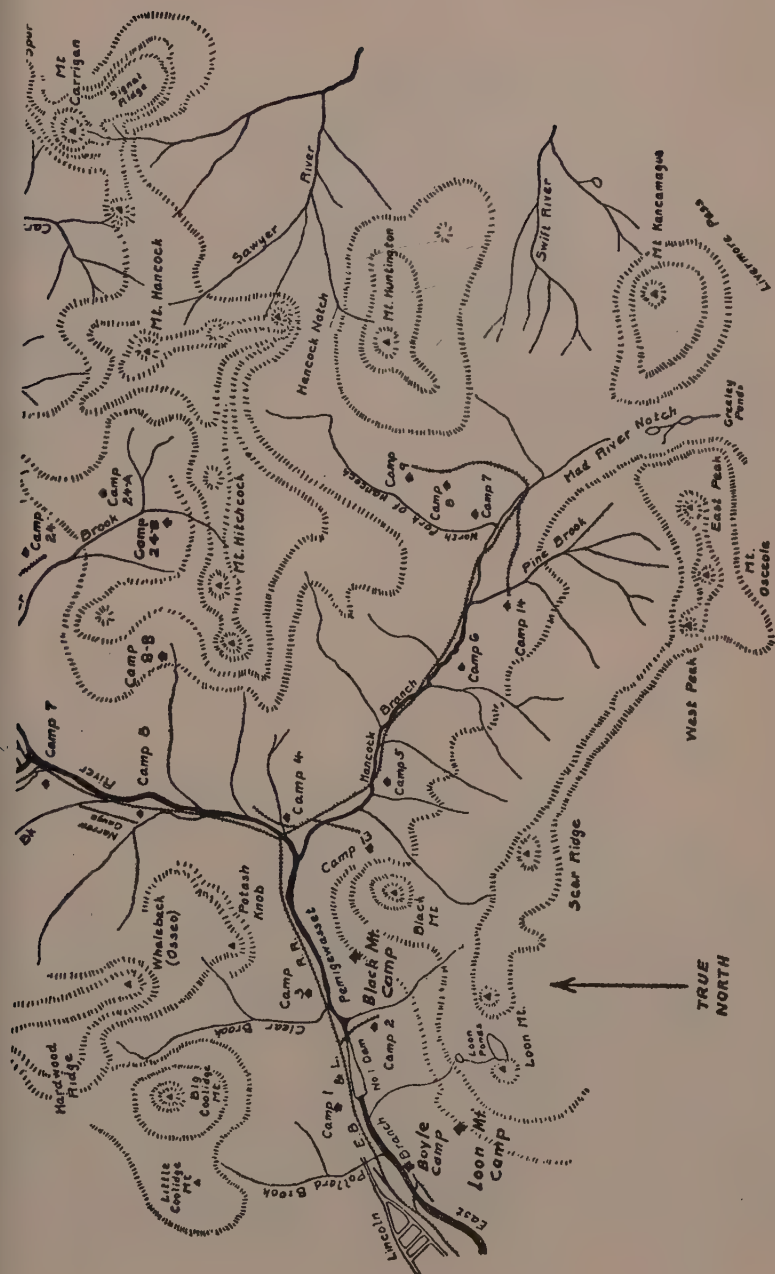
This "intensely paternal" company community existed well beyond the days of the Henrys. It wasn't until after World War II that most faithful workers even had the choice of buying the homes in which they lived or leaving.

THE RAILROAD

The EB&L started quite slowly in its stretch toward the forest. Eventually this line would total more than 50 miles of track up and down the rich valleys that extended to the east of Lincoln like fingers stemming from a hand. Ultimately it would prove to be as fruitful to the Henrys as a major rail empire to its corporate owners. Compared to the other New Hampshire logging pikes this one was a whole rail system and not a single operating line.

During the year from 1892 through 1893 the major project was to build the mile or more of track leading to a connection with the Concord & Montreal R.R.'s branch-line terminus at North Woodstock, and then bargain with the latter crowd over details. Boston & Maine R.R. records indicate that these two parties had a good many differences to settle before they formally agreed, by a contract executed in 1894 and effective the previous July, that Henry's lumber could move a single inch south of North Woodstock. By this contract Henry ceded ownership of the tracks between Lincoln and North Woodstock and had to agree to maintain all his Lincoln yard tracks.

At the same time his forces were running tracks up the north bank of the East Branch into the wilderness. It was a standard-gauge line, with rails originally of 60 pounds, later increased to 72 pounds, to the yard. Yard tracks were 50-pound steel, which was later going to produce operating difficulties as the B.&M. engines operating into Lincoln became heavier and were restricted from running on such rails. The first two engines were Baldwin-built 35-tonners imported from Zealand over the Concord & Montreal main line via Woodsville and Plymouth. They were augmented by other 35-tonners in the late 1890s. In 1907 Mr. Henry, urged on by his locomotive engineers and the need for heavier loads of lumber and pulp logs at his mills, bought two new 50-ton Baldwins which took over for good the hauling of heavy trains from the woods. At this time the lighter units assumed the Lincoln yard-switching duties and occasionally ran special trains to help out. The EB&L's stable of iron horses reached a maximum of six engines, although the total number of units to run on the line at one time or another must have been seven or eight. All the sets of bunker trucks upon which rested



EAST BRANCH & LINCOLN R.R.

the long logs were originally made of wood with cast-iron wheel rims. In 1910 the Henrys changed to steel trucks and increased the average train load on a single run from 3-31/2 thousand board feet to 6-71/2 thousand.

Normally the road engines would make two round trips a day between Lincoln and the current cuttings. On these runs the trains would leave Lincoln in the early morning and afternoon. During the period of heaviest cuttings above Stillwater in the early 1910s the two Baldwins would make three round trips, leaving Lincoln about 8 a.m., 2 p.m., and in the early evening. One engine was hauling from Camp 21 along Shoal Pond Brook while its partner was serving the extensive landings at Camp 19 on Anderson Brook and those at Camp 20 above the present A.M.C. Desolation Shelter. By this time all train movements were dispatched by telephone between Lincoln and the operating camps. According to Francis Boyle the longest load that his father, an engineer on this line for forty years, ever brought down to Lincoln from the East Branch camps was one of twenty-eight carloads behind the faithful No. 5 Baldwin. This was in the productive year of 1912, when Camps 19 and 20 were spewing spruce down from the encircling heights above Stillwater.

The EB&L lasted long enough under an attentive management to become quite a systematic operation. Every Tuesday and Friday whole trains brought welcome loads of supplies to the waiting camp foremen and their men. In between these main supply days the ever-present flat car next to the engine carried a wonderful confusion of incidentals—food, mail, axes, cantdogs, people, and dynamite. The unique operation of excursion trains was instituted in the summer by the Henrys, once they saw that it could pay its way. Karl P. Harrington in his book, *Walks and Climbs in the White Mountains* (Yale University Press, 1926), gives us a brief look:

On gala days in the height of the summer season two or three flat cars used to be rigged up with extemporized railings and filled with chairs, and a hundred or more excursionists made the trip up into "Henry's Woods", to wonder at the new mountains and valleys, exclaim over the winding road, marvel at the various camps, and raid the cook's quarters for hot doughnuts.²

In some places I have heard these trains referred to as "Blueberry Specials" (from the crop some of the passengers were seeking), but essentially they were for tourists or "goofers", as such visitors are dubbed up there today. I am indebted to the late Warren F. Hale, for many years Assistant State Forester for New Hampshire, for a more detailed picture of J. E. Henry's excursion extras:

² See the photograph opposite p. 509.



Courtesy of F. B. Learned

PORTER ENGINE No. 3, E.B.&L.R.R.



Courtesy of F. B. Learned

LIMA-SHAY ENGINE No. 5, E.B.&L.R.R.



Courtesy of U.S. Forest Service

LARGE LANDING ON E.B.&L.R.R., 1903



Courtesy of Yale University Press

EXCURSION SPECIAL AT CAMP 13

From Jackson we [Hale's family] shifted our summer vacation in 1904 to a North Woodstock hotel. At nearby Lincoln the lumber firm of J. E. Henry & Sons was operating. Summer visitors were allowed to see the mill from a special platform. On one of these visits I learned that a special train equipped with settees on flat cars could be arranged for Saturday afternoon for summer guests to visit the logging camps, if 100 persons signed up. The next week I road on horseback from hotel to hotel in the village, posting notices about the proposed 50¢ excursion. Late Friday I made the rounds and found that more than the required number of persons had registered for the trip. Saturday was a beautiful day, and the road to Lincoln was lined with vehicles all headed for the railroad station. The trip of about 12 miles to Camp 10 (in the Franconia Brook valley west of Mt. Bond) was made. Everyone was invited to visit the big cook house to sample the pies, cookies, doughnuts and hot tea.

During each of the next two summers I arranged one of these excursions and they became quite popular. I became acquainted with old man Henry and his oldest sons. The father always made the trip. On one occasion the train stopped out in the woods for no special reason, and I went to Old Henry who was arguing with a man about a fare. That summer the price had gone up to 75¢, but this visitor had not been informed and insisted 50¢ was all he was going to pay. Old Henry waved his hand to the engineer, who promptly stopped the train. Few realized what the argument was about, and after the difference in price had been paid, we continued on our way.

One distinction for which the East Branch & Lincoln R.R. should always be remembered is the high-grade construction of its main line of tracks and the care given to them. Unlike the case on their earlier, crooked line up the Zealand Valley, here on the EB&L J. E. Henry, his sons and their men planned and housekept well on their solid right of way, particularly on the stem between Lincoln and North Fork Junction. This is still very much in evidence along the four-mile section of today's Kancamagus Highway from Lincoln to the Wilderness Trail, and on many stretches between the latter spot and Stillwater. There are some amazingly long stretches of tangent (straight) track between Camps 4 and 7, and especially on the long flat beyond Franconia Brook to Camp 16 clearing at the Bondcliff Trail. Even today the drainage ditches along these sections are doing a fine job of handling rainfall run-off. Anywhere east of Lincoln is rough, tough engineering country, and it is a lasting tribute to the seldom well-educated civil engineers of Henry & Co. that their handiwork will be evident throughout the upper Pemigewasset valleys for many years to come. Past, present or future trampers in these areas stride along easily where Henry's laborers sweated profusely for an avenue to a fortune.

The ties upon which rested this rail system were homegrown within sight of the track. They came from hemlock cut on the property, were transported as long logs to Lincoln for sizing, and returned to their native region for effective use. Although un-

treated by chemicals, many of these ties look sufficiently solid to support another railroad. Certainly many of those still in place will support wilderness walkers for decades. Here and there along the upper lines, some of the ties were removed and piled up by the C.C.C. during the late 1930s. Somehow the rotting piles of these ties beside the trail are more offensive to the eye than their brethren are to the feet on the more frequent, uncleared sections. At many rail junctions, such as those at Camps 7 and 16 and at North Fork, it is interesting to observe that both tracks have their own standard-length ties. The only place where I have come across the longer connection ties in use everywhere today is at the junction just east of Stillwater.

Bridges and trestles were likewise models of good engineering under the Henry management. While today most of these have dropped into the abysses they spanned, one in particular still survives to show the unusual design, construction and care it has been given over the past fifty years—the bridge that crosses Black or Bear Brook at the intersection of the Bondcliff and Wilderness Trails at the east end of Camp 16. The next time you are anywhere near this spot, go out of your way to inspect this remarkable antique. Men don't build or care for structures like that today. Most of these trestles and bridges along the EB&L were the work of a self-taught construction foreman worthy of remembrance, Levi ("Pork Barrel") Dumas, who joined the Henry payroll in the early 1900s and served on the Pemigewasset Plantation well into the Parker-Young years. The many men who knew or worked with "Pork Barrel" proclaim him as a great construction boss, even more remarkable since he could barely read or write. Levi was not only heavy and rotund, as his nickname suggests, but it is also said that his Humpty-Dumpty frame and small round feet caused him to fall frequently on the rough or icy terrain on which he was more often than not required to work his wonders. His responsibilities also included the building of dams and the erection and moving of the many camp buildings, so vital to the method of logging employed on this extensive operation.

Another example of the care with which the tracks and structures along the EB&L were treated by the Henrys and Parker-Young was shown by the presence of a section foreman in charge of every 2-4 mile section of the road. Martin Kelley covered that between Camps 16 and 18. Martin, whose outhouse at Camp 17 is today one of the more lasting signs of the Henry era, so loved this, his country, and his work that he seldom left them except for an annual binge down in the city. For quite a length of time he provided a welcome check-point for anyone passing through his part of the upper valley. Typical he was of the men who made sure that the EB&L, for a mountain logging line, had an unusual safety record.

New construction of railroad, camps, tote roads, landings and the many other physical units of this line was uniformly undertaken in the short summer season when little major cutting was done. In this way the loyal company men could be assured of year-round work in the woods.

While the finest tribute that can be given the engineering wonders performed on the EB&L is their lasting presence, some sixty-odd years later, also worth recording are the comments of George H. Moses in his article in the *Granite Monthly* previously mentioned:

For solidity of construction the railroad is the equal of any in the state if not in New England, and its equipment is of the most powerful and superb quality, for modern lumbering demands only the best.

Even in the last years the EB&L, if not modern, was true to its past and to its founders. Philip R. Hastings, an acknowledged authority on railroadiana, wrote interestingly about the EB&L in the January 1948 issue of *Railroad Magazine*, with the following comments on the operations he observed:

Handling of the log cars is one phase of EB&L railroading which has changed little since the derby-hatted brakemen displaying the latest in handle-bar foliage first rode the line; shacks [brakemen] still lift the pins and hold the links to make couplings, and run alongside the cars turning ratchets with a wrench to set the brakes.

The flavor of the Henrys was there to the end.

THE CAMPS

Many were the camps of the Henrys and the Parker-Young Co. that have dotted the multi-thousand-acre Pemigewasset wilderness over the years from 1893 to the 1940s. Accompanying maps indicate only the permanent camps established during this fifty-year period. In addition to these there were other units higher up on the mountains and closer to the cuttings. While, as a general rule, the major camps were numbered chronologically in sequence from Camp 1 to Camp 24B, there were exceptions. Frequently several camps were operating at one time. Often such a unit as Camp 18, near Crystal Brook, was in operation more than once over a period of twenty years. Camp 16, at the junction of the Bondcliff and Wilderness Trails, was in use from time to time over a thirty-year period. Some camps were quite short-lived, particularly those in the valleys of the Franconia and Lincoln Brooks. Those camps designated with a letter were permanent mountain camps, away from the railheads. Again, in accordance with the general rule, Camps 1-21 were first established by the Henrys, Camps 22-24B by the Parker-Young Co., who later reopened several of Henry's camps in order to get at heavy stands

of timber that Henry had overlooked or passed by as too costly for him to touch. Persons interested in the sequence of the cuttings and camps should check both the *Northeastern Logger* article of April 1955, entitled "Old Days at Lincoln, New Hampshire", or Henry Waldo's "Short History of Lincoln", which also appears in two parts in the fall and winter issues (1960-61) of *Forest Notes*, published by the Society for the Protection of New Hampshire Forests.

J. E. Henry's earlier Zealand camps were permanent units that were noted especially for the eternal darkness within. They were the source of constant complaint wherever I have seen them mentioned. Log structures laid on top of the ground, they lasted their fleeting day and died. Most of them died in flames. But those that he built along the East Branch & Lincoln R.R. were Henry's anticipation of today's portable buildings—frame structures, with windows, that presented a much more attractive appearance within and without. Uniformly, under both Henry and Parker-Young regimes, all these buildings were painted red. By this color you can still identify boards from old EB&L buildings here and there throughout the region of the East Branch.

The most unusual thing about Henry's camps was their portability. Not long after their forces started east out of Lincoln the Henrys devised a method by which their camp buildings were constructed to be put together and taken apart in sections, and transported by train from one location to the next in order to follow the cutting operations. Just who was the person responsible for this different and efficient method of housekeeping may be a question, but wherever I have inquired the credit always goes to the ingenious Pork Barrel Dumas. One of the photographs with this story shows a movable Henry camp in sections en route to a new home in "Henry's Woods". Once there the sections would be lined up side by side to form stables, living quarters, cook shacks, blacksmith shops, and allied structures for many horses, 150 or so lumberjacks, and their bosses. That they were different from other lumber camps of that day can be attested by an article appearing in the official journal of the American Forestry Society, *Forestry and Irrigation* (May 1902), entitled "Lumbering in New Hampshire" and written by two foresters, A. W. Cooper and T. S. Woolsey, Jr.:

J. E. Henry and Sons' lumber camps are very much after the fashion of logging camps in general, save for some exceptions worth mention. First of all, the camp buildings are made of boards instead of logs. . . . Another interesting feature of their system is that of transporting the camp buildings from place to place by means of the railroad. Buildings of this sort are either long and narrow or so built that they can be readily taken apart. They are usually 14 feet in width and from 30 to 50 feet long. Of course, camps of this description are usually confined to the railroad at the foot of the



Courtesy of U.S. Forest S

ONE OF LEVI DUMAS' PORTABLE LOGGING CAMPS, 1903



Courtesy of Francis Boyle

LOOKING WEST AT CAMP 16, 1920



HENRY FAMILY IN CAR, ABOUT 1910

Left to right: Driver, J. E. Henry, Mrs. J. E. Henry, John Henry (son), Mrs. John Henry.

mountains, while those further up are built of logs. These latter are burned down when they are abandoned to discourage possible campers who might carelessly start fires.

One good reason for the wide, straight sections along the main stems of the East Branch & Lincoln R.R. is now quite obvious. This line had to be clear enough on both sides and overhead to make room for Henry's camps on wheels.

Each permanent camp consisted of an assorted set of structures. The picture opposite page 377 in the June 1961 issue of *APPALACHIA* (Camp 22 in the Parker-Young era) is typical. Odd bits of many of these camps still dot the back country of the East Branch. It is time well spent to poke around in any you pass for interesting relics and mysterious clues of another, dramatic day.

Living in either the Henry or Parker-Young camps improved as the years rolled by. What it was like under either management, or at any one time, depends on whom you ask and the circumstances that put that person in a Pemigewasset camp. Reference has already been made in Part IV of this series (*APPALACHIA*, June 1961, p. 366) to life in J. E. Henry's camps on the Zealand Valley R.R. Harold Leich, on page 377 of the same issue, records his impressions as a college student when living awhile in 1928 at the Parker-Young's Camp 22 on the North Fork. The late Warren F. Hale adds the following view of life in a Henry camp back in 1905, when he was a student forester:

Now lumber camp bunkhouse life cannot be easily described. Woodsmen hang their wet clothes near the big stove; they wash their face and hands each morning and sleep two in a bunk in their underclothing. A bunkhouse often contains 100 men. At night this closely-packed mass, snoring at high and low gear, talking in their sleep, with other sundry noises, is no place for an outsider. Two of us decided to take our chances during pleasant nights in sleeping on the platform of an old shed where a few chickens were kept.

At about the same time as that of which Warren Hale speaks a "woods poet" recorded his impressions in a poem that is printed in *Minstrelsy of Maine, Folk Songs and Ballads of the Woods and Coast*, collected by Fannie Hardy Eckstorm and Mary Winslow Smyth (Houghton Mifflin Co., 1927). This poem, "In Camp with the Henrys", is critical of the cleanliness and particularly the food in the logging camps.

True it is that the food in these camps depended on the cooks, who could be counted on to be pretty much the boss back at their camp, but true it is also that camp living along Henry's East Branch line seemed rather good to most of the old hands with whom I have talked. All of them recall improvement in the eating, and in sleeping quarters, as time went by. In time the camps were to get their own electric lighting and regular delivery at the kitchen door of refrigerated meats and perishables. Francis

Boyle expresses the memories of most of these men in the statement that "the Henrys (and Parker-Young) fed their men well". The Cooper-Woolsey article in *Forestry and Irrigation*, previously mentioned, records:

Many men will work for Henry in preference to other lumbermen on account of the good food furnished. Fresh beef is served three times a week and the cooking is unusually good.

One feature of East Branch camp life—and a nearly unique feature of life in American logging camps—was due to Rule No. 46 of the famed "J. E. Henry & Sons Rules and Regulations", which were posted conspicuously in the Zealand and East Branch Camps. Excerpts from these rules follow, but it is worth commenting on this one first. "Any person found throwing food or making unnecessary and loud talk at the tables will be fined." There was good reason for this rule: the lumberjacks and teamsters would spend more time at work for the Old Man, who showed his own character with the threat of a fine. In the Parker-Young days this rule was somehow reduced to "No talking per ord. cook". (See APPALACHIA, June 1961, p. 377.)

Other rules were:

1. The proper length to tie a horse when in the stable, is two and a half feet, and positively not over that.
5. Do not feed the horses on the ground, but have boxes for them.
7. If teamsters will let their reins drag on the ground, they must expect to be charged all loss by so doing.
10. Teamsters are supposed to throw sticks out of the road instead of driving over them day after day, as they are liable to kill or injure the horses.
11. Teamsters are hired to drive their horses and not let them go loose; if any horse is injured by a teamster neglecting this rule he will be held responsible for all damage done.
12. Do not tie a horse with either strap or rope around the neck.
14. Every teamster is expected to take good care of his team, see that they are cleaned night and morning, watered at least three times a day when standing, and at least five times a day when at work.
16. Do not trot horses down grade when it can be prevented, that is do not let them get the habit of trotting down every hill on the road.
21. Timber is to be cut down to a 7 inch at top end and 10 inch at butt.
23. When cutting roads be careful to save all down logs and trees that are $\frac{3}{4}$ sound.
24. All men will be required to cut stumps low to the roots of trees; if found cutting stumps high, or topping off trees so that valuable timber is left in the woods to waste, they will be charged with such waste.
25. If a chopper is continually sending in rotten and worthless timber, he will be charged with the hauling of same.
27. When dropping the first logs onto the cars, both ends should drop at once to prevent breaking the drawbars and cross pieces of car.

37. All Trees over 12 inches at butt must be felled with a Saw.
38. Any chopper found cutting stumps high will be charged with such timber as is left on the stump.
42. Any person found watering a horse immediately before going into feed shed or stable, will be fined \$1.00.
43. Any person found letting a horse or horses go loose to and from landings and stable, will be fined \$1.00.
44. Any person found feeding hay at noon or hiding hay or grain to feed horses, unknown to the hostler, will be fined \$1.00.
47. Any person but teamsters, found leaving their work before 6 o'clock at night, or until dark, will be charged with one-fourth day lost.

These rules are taken directly from a framed original which was kindly loaned to me by one of J. E. Henry's direct descendants. It was on Henry's strict insistence upon the observance of these rules that many of the legendary stories concerning him were based. It is rather interesting to observe that twenty-eight of the forty-seven rules concern the care and handling of his great love, horses. This heavy proportion lends credence to the comment he was supposed to have made once on Osceola's Scaur Ridge, when one of his lumberjacks had died violently: "Worry about the horses, 'cause they make you money".

A tribute to the fame and importance of these rules is that they have been recorded in the pages of New England folklore in a ballad by Larry Gorman to be found in the collection mentioned above. A native of Prince Edward Island, Larry later moved to Ellsworth, Maine, and in his lifetime lumberjacked extensively in the Provinces, in Maine and for one term in the White Mountains. Four stanzas of this poem are here quoted:

Henry's Concern

Every month with pen and ink they'll figure up the cost;
 The crew is held responsible for all things broke or lost—
 An axe, a handle, or a spade, a cant-dog, or a chain—
 They'd call us fools to stand such rules in the good old State of
 Maine.

To lose your time and pay your board, or work in sleet or rain,
 We never heard of such a thing thro'out the State of Maine;
 And for the grub I'll give a rub, and which it much deserves,
 The cooks they get so lazy they'll allow the men to starve.

The meat and fish is poorly cooked, the bread is sour and cold,
 The beans are dry and musty, and doughnuts hard and old;
 If you were to eat one it would give your jaws great pain—
 The grub we oft times have's a change, in the good old State of
 Maine.

Now here's adieu to camp and crew, to Henery and Sons,
 Their names are great throughout our state for the biggest sons
 of guns.

I wish them all prosperity till I return again;
I'll mend my ways and spend my days in the good old State of
Maine.

A slightly longer and different version, with music, appears in *Northeast Folklore* (1959) as part of an article by Edward D. Ives.

OPERATIONS UNDER THE HENRYS

The teamwork of J. E. Henry and his three sons reached new heights in their time on the EB&L. Until his retirement at the age of seventy-seven in 1908, J.E. was boss of all this wholly-owned family enterprise. The oldest son, George, was in charge of all woods operation; the second, John, ran the sawmill; and the youngest, Charles, bossed the papermill. From 1893 to 1902 lumber was the company's only product. In 1902 a pulpmill was added to their operations to devour the many shorter lengths of timber that existed throughout their hills, and in 1906 the Henry Paper Co. was established to manufacture and merchandise paper. The sawmill was shut down in 1908, the year J.E. disposed of his interests in the family enterprises to his three sons.

The methods employed in harvesting the East Branch country were not unique for that day, but the Henrys put their own twist upon them and carried them on at an assembly-line pace not duplicated elsewhere in New England then or since. Ernest Russell, in his article "The Wood Butchers" in the May 8, 1909, issue of *Collier's*, quotes a remark by son Charles Henry on the paper-making end of their business which epitomizes the final result of the Henry operation. "It's something like the stockyard pig here in this mill," he observed with a grim smile. "You'll find there's nothing left but the squeal." Two other direct quotations from the Henrys in the same story are most pertinent to the way they did business:

"I never see the tree yit," [J.E.] has said with a frankness and an unction that would have fairly warmed the heart of Uncle Joe Cannon, "that didn't mean a damned sight more to me goin' under the saw than it did standin' on a mountain."

. . . and to hear the eldest representative of the firm (George) say in a quiet and expressionless voice: "We don't mind just criticism—it's the other kind that hurts. There's no secret about this business of ours; we own the land and the timber and we're making every dollar out of it we can."

Ernest Russell in this article sums up his personal observations of what was going on back in the woods with these words:

It is desperately clean work that is going on in the East Branch Wilderness. There was little talk—simply concentrated effort and energy, and throughout it all a perfectly apparent genius of direction.

. . . Everything was coming down before those merciless axes, and the slash—the prelude to fire that some day will sweep up the valley as it did over Liberty two years ago—lay in great heaps, black in the snow.

Forest experts Cooper and Woolsey, in the previously mentioned article in *Forestry and Irrigation*, saw the same efficiency in action six years earlier:

Every detail points to the care and thoroughness of their lumbering. There is no waste timber left in the woods. All side logs, stringers, and slew skids are hauled out when the roads are abandoned. The movable camps and stables, the government and care of the men, the good road and switchback systems are evidences of economical and careful lumbering.

We could dismiss the methods of the Henrys with these quotations, but in so doing would miss many unusual features. Take the logging (tote) roads which are proving to be more durable than any others built at that time in the White Mountains. Literally hundreds of these were constructed by Billy ("the Bear") Boyle, whose only transit was right up there in his head and whose only education came from experience with the Henrys. Woodsmen called these "Dugway Roads", since most of them had to be dug well into the mountainsides. Dugway roads were the main haul lines for the teamsters and were always built in digging season, summer. The less important "upper" roads were frequently constructed on snow in winter, using side logs, bunters and brush to make the roadway. Today's explorer, veteran or novice, will get to know the difference between a dugway and an upper after a few bushwhacks. The former will get him through and the latter will not. Many miles of Henry dugways are getting walkers through parts of the Pemigewasset today, and so they will for some time to come. The article in *Forestry and Irrigation* gave the Henrys an "A" in road building: "These roads (main hauling) are remarkable for their average excellence. Mr. Henry believes it is wise economy to put more money into roads and save horseflesh".

We must not leave the subject of tote roads without special mention of those high on the northern flanks of Carrigain above Camp 20. These seem to have been so well etched into the mountainside that today they look like contour lines. Here it was that the grades were so steep and the terrain so rough that hauling had to be done in summer by four-horse teams. Also interesting to observe today, on the same slopes, are the upper cutting lines with the virgin spruce showing clearly above the lower second growth. Virgin timber such as this the Henrys left as not worth removing. No one else has disputed their judgment. The one slope where roads never were dug was on the Scaur Ridge of

Mt. Osceola, where a three-inch snub line had to be employed to lower logs to landings.

Another type of place where the Henrys engineered with care was at the landings, many of which are still easily recognized, near their respective camp clearings, by elevated cribbing design. In fact today's Shoal Pond Trail climbs up to and utilizes the Camp 21 landings. For strength and longevity, only peeled hardwood logs were used in this construction, wherever there was choice. Landings were normally built to hold between four and six cars, with storage capacity of 10,000 board feet or more of logs. Each had an upper and a lower section, to sort the pulp and timber logs. Run-around roads at these landings enabled teamsters to return for another haul.

The Henrys made one fruitless attempt to reduce tote-road cost by the installation in 1901 of a narrow gauge, gravity rail line in the valley behind Camp 8 on the east side of Osseo Peak. This unit operated for a couple of years, and the presence of virgin timber in the upper reaches of the valley testifies to the hauling troubles that must have been encountered. This short-lived line was clearly described in the Cooper-Woolsey article in *Forestry and Irrigation*:

Since the summer of 1901 J. E. Henry & Sons have adopted a narrow gauge, switchback system, and at every angle of zig-zag an extra length allows cars to pass. The road is portable and see-saws up the slope. . . . The empty cars are hauled up by 3 horses and are run back in pairs by gravity, with three men to brake. According to the first year's figures, this system is about 10% cheaper than hauling roads for summer work. . . . The only change in next summer's operations will be the trial of a Baldwin logging engine in place of horse power for hauling up the empties.

Pay day for workers in the EB&L came only once a month—on the 22nd. Over this event, it is said, presided none other than the prexy himself. Legend also has stated that he did it with a gun on his hip to make sure that all employees agreed with the company's noted deduction system for goods bought on credit and for fines. Payment was made in cash, only upon display of the worker's numbered brass tag. Any number of yarns about Henry's influence on this special day have been recorded elsewhere. My favorite concerns one man who earned his pay without ever having worked on Henry property:

A good many men were hired through an employment agency in Boston but had to make their own way to Lincoln. One day too many of them arrived for his needs, and so when another came into the office and asked for a job he said, "I'll give you a job. Count the ties from here to Boston." He meant, of course, that he had no job open for him. The man, however, took him literally, and counted the railroad ties to Boston. He reported back in due time with the

number of ties. Mr. Henry checked with railroad officials and found that the man was approximately right and so paid him for his time.³

MORE FIRES

One of J. E. Henry's greatest concerns was fire, and well it should have been. It had haunted him more than once on his Zealand plantation and would do so again during his Lincoln days. 1907 proved to be his worst fire year. On May 13th of that year one of his switching engines belched some stray sparks at high noon into a hay supply at one of the company barns in the center of Lincoln. It proved to be an event remembered even by the youngest in Lincoln, for the fire was out of control in an instant and before it was extinguished it had burned many homes (including those of John and George Henry) and company buildings in the center and east end of Lincoln. Henry C. Waldo, in "A Short History of Lincoln", relates that "fire equipment [sent to fight this fire] was delivered by railroad from Concord in the amazing time of fifty-five minutes".

The town of Lincoln was still rebuilding from this disaster when another four-bagger⁴ blew out of control up on the Franconia Branch. The cause was a lightning strike high on the east side of Owl's Head prior to Saturday, August 17. Since some confusion still exists on whether this fire occurred in 1907 or 1908, and since its mark will still be on this vast basin for some years, we should look a little further into the details.

The year in question was one in which public agitation for forest preservation in the White Mountains was at its height. Conservation experts and near-experts were everywhere in the hills and in particular in that part of the country where Henry's devastating crews were doing business as usual. The American Forestry Society's Thomas Will was among them and wrote the following editorial in the September 1907 issue of their journal, *Forestry and Irrigation*:

The following day [Aug. 10, 1907] I looked over the upper Franconia basin. The area in question is owned by the firm of J. E. Henry & Sons, which for some two decades has been lumbering in the White Mountain forests. This firm does business on a grand scale. It owns its own railway lines into the harvest fields, cuts its own trees, bears away, works up or otherwise disposes of its own spoils and in general, does as it will with its own.

A month later Mr. Will in the editorial column of the same journal had a much grimmer picture to paint:

³ *A Treasury of New England Folklore*, Crown Publishers, 1947.

⁴ General alarm fire.

Again prophecy has become history. On August 10th Forester Ayres [a former president of the Appalachian Mountain Club] of the Society for the Protection of New Hampshire Forests and Secretary Will of the American Forestry Association sat on Mt. Lafayette and looked over some 25,000 acres clean cut by the J. E. Henry Co. The ground was thickly covered with branches, tops and logs. They predicted that forest fires would soon sweep this region.

On Aug. 27th, seventeen days later, the *Boston Post* said in part in a half-column editorial: "In the once virgin and beautiful White Mountain region it is happening as predicted. Following the lumberman comes the fire, and it is the end of forest beauty for not less than a generation and perhaps forever. . . . Survey from Mt. Lafayette shows Mt. Bond to be swept clean, the easterly slope of Mt. Garfield burned over, and the southerly slope of Mt. Guyot fiercely burning with flames eating up Mt. Lafayette.

A few quotations from that unusual mountain journal, *Among the Clouds* (August 19, 1907), give closer and more intimate definition to the area burned and details of a major forest fire of a size unknown in these mountains for fifty years:

A forest fire was noticed from the summit [Mt. Washington] Saturday in the valley between the Franconia and Twin Ranges, or more exactly, to the east of Mts. Flume and Liberty and west of Bond and Guyot and not many miles from North Woodstock.

Sunday night the volume of smoke had increased and this morning it rose in a great mass, wholly hiding Mt. Moosilauke. Driven before the northwest wind the smoke had gone beyond Lake Winnepesaukee and lay over the valleys far toward the ocean; while some other current had carried a long streak of smoke toward Vermont. The destruction of timber must have been enormous.

The great conflagration was given almost daily coverage by this summer paper through August 29th. Articles were written on the unusual atmospheric effects of the fire in the August 21st issue; on the 22nd the comment was that "The glow of the great fire in the Lincoln Valley near Mt. Lafayette reflected on the clouds above attracted the attention of Summit Visitors last evening"; on the 23rd came the report that "Thursday afternoon the fire in Lincoln was seen to advance northerly until the smoke rose along the whole eastern side of Mt. Lafayette. . . . This morning the smoke is rising in a threatening manner again still further north, in the vicinity of North Twin Mountain"; and the edition of August 24th contains an indirect report from E. H. Lorenz, of Hartford and Pierrepont Alford of Shawnee, Okla., of their rather close observations of this holocaust as seen earlier in the week as they skirted its edges over the Garfield Ridge, the Twin Range and Mt. Carrigain.

The August 27th issue contains the fullest report of the still-burning fire in an article entitled "Results of the Lincoln Fire", excerpts of which follow:



PATTERN OF LOGGING ROADS AND CLEAR-CUT SLOPES ABOVE CAMP 12



Courtesy of U.S. Forest Service

OTTO HEAD, EIDE, OF SAGEBROOK, GILLIE, & CO.

It is estimated that 35,000 acres have been timbered. . . . Most of the Lincoln territory is owned by J. E. Henry & Sons Co. Mount Bond has been burned over clean, the eastern slope of Garfield has been swept, and the southerly slope of Guyot and the northeasterly slope of Mt. Lafayette have suffered. . . . But small parties of men have been engaged in fighting the fire, which was a most difficult one to contend with.

Final specific mention in this paper appears on August 29 with the report that "the forest fire which has been raging in the Lincoln Valley appeared yesterday to have broken out afresh on Mount Guyot at the southern end of the Twin Mountain Range".

The late Professor Karl P. Harrington, a former A.M.C. Trail Councillor and a long-time summer resident of North Woodstock, describes this fire in his book, already mentioned, *Walks and Climbs in the White Mountains*:

From the peaks of the Franconia Range the fire could be seen burning in various directions. At both ends of Owl's Head the thick smoke arose, and brands were carried across the intervening valley to the slopes of Mt. Bond, and some of the camps were threatened with speedy ruin. A large force of men was sent out to fight the fire, with only moderate success; and many days passed before rain and the dying of the winds ended the devastation.

The best post-mortem description of the extent of this wilderness devastation appears on page 3 of the August 1908 issue of the A.M.C. *Bulletin*:

Monday [July 6, 1908] was Lafayette day, nearly all joining in a go-as-you-please trip to that magnificent summit. . . . The areas in the valley of the Franconia and Red Rock Branches east of Lafayette which were burned over in the forest fires of *last year* [my italics] were noted, the fire extending from the East Branch of the Pemigewasset nearly to the summit of Garfield and from the Franconia Range itself to the very ridge in places in the Twin Range, leaving this vast region a country of charred stumps and dry stream beds.

While the cause of this fire was a natural one, its spread in an extensive, well-cut basin was certainly enhanced by Henry's ever-present slash. He left his mark there. Today it would seem as though the acreage mentioned in all the reports was a bit exaggerated, for I have reliable advice that in the winter of 1909-1910 heavy logging was done in the Hellgate Brook valley of this basin from Camp 10, where the spruce had not been touched by the fire. A most unusual fire this one was, but no one should minimize the lesson it teaches in unnecessary, severe ecological damage.

It is interesting to point out that James Everell Henry retired his active hands and fertile brain from his firm just one year after this fire and just one year before the firm's papermill at Lincoln burned in 1909, the last of the big Henry fires. In retro-

spect it is indeed a miracle that the East Branch country did not suffer later extensive forest fires, what with all the slash that was draped over its slopes during these many years of clear-cutting.

EXIT THE HENRYS

J. E. Henry had led a rugged life in the White Mountains. It is a remarkable testimony to his vitality that retirement came as late as the age of seventy-seven. Ernest Russell, in his *Collier's* articles written in 1909, indicates that much of this stern individualist's strength had been exhausted in living his legend:

Somewhat apart from the closely-clustered village, in a little white-painted house which overlooks the valley and faces the huge rampart of Loon Pond Mt., lives—if you can call it that—Jim Henry. Sightless, feeble with his eighty years, relinquishing to his sons, because he must, an industry that has been the very core of his existence, he frets away his few remaining years. . . . Now he has his millions—perhaps the Lord knows how many, the assessors don't, and that is all.

James E. Henry, who died in this same white house on April 19, 1912, two days before his 81st birthday, had cut a memorable but devastating windrow across White Mountain history and legend. In his time he had played the leading role in the drama. Forced to work at the age of fifteen, he died leaving a personal estate valued at \$10,469.87, all of which he bequeathed to relatives, the "millions" which he had earned from his forests and mills having been transferred to his sons at his retirement.

No forests are inexhaustible, treated as these had been by the Henry methods. George, John and Charles Henry hacked away at the choicest of the remaining spruce and fir of the East Branch rather intensely for a short five years after their father's death before they had had enough. Clear-cutting was something that they had been taught almost from birth, but culling and picking over the Pemigewasset's left-overs was new to them. On the scene must come persons acquainted with, or interested in, picking up loose ends. At the beginning of World War I, on August 30, 1917, all remaining New Hampshire lands and interests of the Henry companies were sold to the Parker-Young Co. in what has been reported as one of the most high-priced real-estate sales in the state up to that time. Included in this sale were a sulphite mill, a ground-wood mill, a papermill, an electric distribution system, one hotel, one hospital, a coal steamplant, waterpower rights at Livermore Falls, camps to entertain customers, ice-houses, 100,000 acres of cut-over woodland, about 150 homes for faithful workers, and a flourishing East Branch & Lincoln R.R., then at its maximum mileage. No longer was all of this to be a family corporation or operation.

THE PARKER-YOUNG YEARS

By the time the new owners had taken possession and commenced operation of their new paradise in the Pemigewasset, a heavy share of the original tree-cover had been hauled off by the EB&L. That which was left was way up high, deep in the back country or tucked away in tight, steep valleys. The bulk of the rail line had been laid, and most of the camps had been established. The late Honorable George F. Morris describes the new owner extensively in his memoirs, *Yankee Jurist*, only a part of which description is included here:

It carried on a lucrative business in both Lincoln and Lisbon for a number of years until the Lisbon plant was finally sold to the Lisbon Manufacturing Co. After that the business of the Parker & Young Company was entirely confined to its Lincoln plant, the principal industry of which was the manufacture of paper.

It increased its operations to quite an extent and its property covered a vast territory.

He did not report that the Parker-Young Co. was the sole owner of the stock of the Woodstock Lumber Co., who had their own rail operation, a plant at Beebe River, and a home office on State St. in Boston. By themselves, or through the Woodstock Co., Parker-Young over-extended their interests and operations to such distant points as unfamiliar timberlands out of Point St. Joe, Florida, Gray's Harbor, Washington and Aroostook County, Maine. Focus on the East Branch & Lincoln R.R. blurred with these wider visions, and slowly the biggest of New Hampshire's logging lines shrunk back toward town. The flood of 1927 didn't help matters, with the damage it caused along the East Branch. Financial pressures from this and from the following depression came, and with them a contract sale to the U.S. Government to fill out a vast hole in the existing White Mountain National Forest. This contract allowed certain cutting rights in the territory for a period of twenty years. The government sale served as a much-needed cash injection for awhile, but the end result was problems so great that the Parker-Young Co. went through the bankruptcy wringer in 1933, to emerge some years later a shadow of what it had been in its brighter days. Judge Morris, who presided over some of these bankruptcy sessions, covers many of their troubles in *Yankee Jurist*—extended interests, marginal investments, and fat salaries. The rest of the record is well-documented in State and Federal court files. Of necessity the East Branch & Lincoln R.R. went through the wringer, too. Its forests were exhausted. After World War II the Parker-Young Co. ceased its operations with the sale of what was left of Henry's plant, premises and railroad to Marcalus Manufacturing Co. in 1946. Two years later the remaining trackage of

the EB&L east of Lincoln was pulled up and the Granite State's biggest logging line was no more.

These latter years of the rail line were not without memorable incidents concerning unusual and difficult operations back in the hills. Most of them can still be related by persons better acquainted with them than I. Many observations are worth making, but the most outstanding one concerns the loyal men who ran the line, operated the camps, and worked in the woods or the mills after the Henrys sold out. They proved to be a most solid foundation for Parker-Young, especially when maintenance standards for the roadbed and equipment were lowered from lack of cash. Many of these loyal men agreed to being moved to far-away places to help the Company.

Harold Leich has mentioned (APPALACHIA, June 1961) operations out of Camp 22 on the east side of Mt. Bond. This was a big operation in the Parker-Young era. Another was the new line they laid one and a half miles up Cedar Brook to get to the untouched northern flanks of Mts. Hitchcock and Hancock from Camps 16, 24, 24A and 24B between 1927 and 1946. These were logging jobs in the tradition of the Henrys, jobs which involved the teamplay of hundreds of men and animals. But by the 1940s, as Philip Hastings so graphically relates in *Railroad Magazine* (January 1948),

The East Branch & Lincoln has come upon hard times. Shay Number 5 rarely ventures up the crumbling roadbed into the woods, since motor trucks are being groomed to take over the job of hauling down the "big sticks". A clattering Model A Ford railcar, a converted station wagon, still pushes its way through the engulfing weeds and brush to Camp 16 each day to carry a supervisor to the scene of the cutting operations. Thus far, no motor roads penetrate to the far reaches of the EB&L territory, so in season this railcar often carries hunters and fishermen to the isolated mountain fastnesses. Soon, however, the sportsmen will have to hike up an abandoned right-of-way to reach their favorite spots.

Except for yard-switching operations, 1948 marked the end of the East Branch line. The lumber barons, their many men, the peddlers and excursionists are gone, but the record they have made is everywhere in these hills. May the sportsmen of tomorrow always have to walk up to their favorite spots in the fastnesses of the Pemigewasset wilderness. In this manner the record is better seen and more fully appreciated.

EAST BRANCH REFLECTIONS

Quite rightfully the major portion of the story of the logging railroads of the White Mountains has been devoted to those units operating in the area bordered by the Ammonoosuc, Saco, Mad and Pemigewasset Rivers. This was the heartland of the re-

gion. It still is the heartland of these hills, and fortunately one which features less dramatic but more abiding attractions today. How interesting that back in those days it should have been dominated by two such contrasting families as the Saunders of Livermore and the Henrys of Lincoln. Credits have already been given to the former (*APPALACHIA*, December 1960, p. 216). A different type must now be mentioned for the latter.

It is very tempting to add even more lament and criticism to the myriads written about J. E. Henry in his lifetime. But, some fifty years later, we can judge on different evidence what we experience, see with our own eyes and appreciate—a varied and verdant wonderland continuing rightfully to earn its name of the Pemigewasset wilderness. The East Branch still grows its cloak thick and fast. It is inhabited by even more animals today than when Henry's forces started butchering its virgin spruce. The streams are crystal clear and full of fighting native trout. The merits of the Pemigewasset wilderness outweigh its shortcomings. It will continue to improve.

Do not judge Henry or his methods unfairly. In 1900 the infant science of forestry knew few methods. It took the Henrys of that day to develop the science of forestry of the present. Despite his critics, Henry and his lumbering were as much a part of that era as the asphalt jungle and the real estate sprawl of today.

For more than twenty years, between 1885 and 1910, New England's conservationists had crusaded without focus for a public White Mountain preserve. Their continued taunts—yes, their blasts—were not in vain, for in time they drove the clear-cutters to ply their trade in classic manner of efficient woodland slaughter. In the field of thorough clearing of the ground here in New England James Everell Henry was without equal in doing this with singleness of purpose. In 1961, on the occasion of the golden anniversary of the establishment of the White Mountain National Forest, we of this day should salute "The Grand Duke" as the man who did more to force its creation than did any other lumber baron. He had raised the public's emotions to a winning fortissimo. For this we are grateful.

In closing, it is a matter of interest to mention that many of the wooden dollars which were made by both the Saunders and the Henrys in the Granite State are still at work today. Truly substantial bequests and gifts by the Henry sons and their mother have made the Morgan Memorial of Boston, Goodwill Industries of America, the great rehabilitation agency that it now is in this country. Those of the Saunders' estates have similarly strengthened the work of the Episcopal Diocese of Massachusetts. Much of yesterday's Pemigewasset riches is today in the public realm.

VARIOUS NOTES

ALPINA

In the Himalaya, the attempt of Sir Edmund Hillary's expedition, composed of British, American and New Zealand mountaineers, to climb Makalu (27,790 ft.), the world's fifth highest peak, without oxygen was brought to a halt in mid-May because of several cases of serious illness among the members. First of all, Sir Edmund himself suffered a mild stroke after reaching Camp IV at 23,000 feet. He was able to descend to the Barun valley, at 15,000 feet, where a few days apparently brought him back to something like health and strength, but the expedition doctors absolutely prohibited his returning to the mountain. Under the leadership of Dr. Mike Ward other camps were established, up to VII at 27,000 feet, in the face of constant fierce winds. From this camp Peter Mulgrew, of the New Zealand Navy, and Capt. Tom Nevison, U.S. Air Force surgeon, with the Sherpa Annullu, attempted the final assault. But at 27,400 feet on the final ridge, with no great difficulties ahead, Peter Mulgrew suddenly collapsed with a severe pain in his chest, a blood clot having apparently entered his lung. With great difficulty he was helped back down to Camp VII for the night, and the next day down to 26,300 feet, where he collapsed again and where the three were obliged to spend two more nights in a rough camp. Here help came up to them in the persons of the next assault team, Harrison and Ortenburger (our compatriot Leigh Ortenburger, well known for his Teton climbs and guidebook); the group together managed to bring Mulgrew, now scarcely breathing, down to Camp VI, where seven men then spent a night in two small tents with only two sleeping-bags and no cooker, and then to Camp V. Finally, badly frostbitten and in terribly weak condition, Mulgrew reached Camp I and the Barun valley. Meanwhile Tom Nevison and Mike Ward both developed pneumonia and others incurred minor ailments. Mulgrew and Ward were eventually flown out by helicopter to the American hospital in Katmandu, where both recovered, although two months later it became necessary to amputate both Mulgrew's legs below the knee, because of gangrene setting in after the severe frostbite.

Previous to the attempt on Makalu most members of the expedition had been living for months at 19,000 feet in a program of thorough acclimatization. Sir Edmund gives it as his opinion that his theories in this matter have proved to be wrong; for although the men lived and worked with ease at the 19,000-foot station, he believes that eventually this stay had so weakened their resistance as to make them unduly susceptible to pneumonia, thrombosis and other high-altitude troubles. He now thinks that to attempt a peak of over 27,000 feet without the use of oxygen is not worth the risk.

Other more positive results of the expedition were the gaining of a complete conviction that the *yeti* is a myth, and providing the Sherpa village of Khumjung with a new (Buddhist) spiritual center and a new school. (*London Times*.)

Other important Himalayan climbs. On May 16 a nine-man British expedition led by Joseph Walmsley, a Lancashire engineer, made the first ascent of Nuptse (25,860 ft.), described by Sir John Hunt as "the last real plum" in the Everest massif (Everest itself and Lhotse being the others). The final assault party consisted of Dennis Davis, another Lancashire engineer, and a Sherpa named Tashi. On the next day another party from the expedition, consisting of three Sahibs and a Sherpa, made a second successful ascent. The route lay up the south face and seven climbing camps were required.

On May 6 an Indian expedition climbed Annapurna III (about 24,860 ft.), and on June 13 another Indian expedition climbed Nilkantha (27,640 ft.).

On June 4 an Austrian expedition climbed Mt. Ghent (24,278 ft.) in the eastern Karakoram. Five attempts were necessary before the summit could be reached.

A Royal Air Force expedition climbed three virgin peaks of 20,000-21,500 feet in the Karakoram, but gave up an attempt to ascend Peak K-6 (26,200 ft.) because of bad weather. A second British party, the Derbyshire Himalayan expedition, made first ascents of two peaks of about 17,700 and 19,700 feet, and a second ascent of White Sail (21,150 ft.), but failed in an attempt on Indrasan (20,410 ft.) in Kangra. One of the Sherpas is said to have run amuck with an axe, during illness caused by the altitude, and then tried to commit suicide with an ice-axe. (*London Times*.)

A Japanese expedition attempting to climb the peak generally known as Langtang Lirung (23,770 ft.), in the Nepal Himalaya, was overwhelmed by an avalanche on May 11 as the men lay asleep in their tents at a 20,000-foot camp. Three men—the leader, another Japanese, and a Sherpa—were killed, and others injured. Rescue operations were halted when the remaining members of the party were caught and carried down by a second avalanche, causing injuries but no further deaths. The climb was then given up, although only minor difficulties remained.

In the Andes, Peru has been visited this year by a large number of expeditions—British, German, Italian, Japanese and Spanish—and many first ascents made. At the beginning of the year Eric Shipton, with a small party, made a remarkable first crossing of the southern Patagonian ice-cap, from Canal Baker at its northern end to Lago Argentino on the south. Snowshoes were used instead of skis, and a unique piece of equipment was a collapsible fiberglass sledge. (*London Times*.)

In Alaska, the south face of Mt. McKinley (20,320 ft.) was climbed for the first time, in July, by a team of six Italian mountaineers led by the professional guide Riccardo Cassin. According to Bradford Washburn, who had suggested the route¹ and to whom we are indebted for

¹ In his article on Mt. McKinley in the *Mountain World*, 1956/57, pp. 79-81.

many of the details of this and the following climb, this is the greatest achievement in the history of mountaineering in America. The party were plastered out upon the steep 10,000-foot face for two weeks of unbroken climbing more difficult than that upon the regular route up the Aiguille de Grépon at Chamonix; there were long stretches of Class IV pitches and substantial sections of Class V. (These are the European ratings, having values considerably higher than the grades carrying the same numbers in American usage.) Pitons were used for much of the climb, and 6,000 feet of fixed rope were placed. All food and heavy equipment had to be hauled up the face. One member of the team, Gian Canali, although his feet were severely frost-bitten and quite hard, completed the climb; it required three days for the others to get him off the mountain, after which he was flown to Anchorage. (There he was in hospital for six weeks and eventually lost several toes.) The party described the climb as a fight all the way against high winds, snow and below-zero cold, while constantly engaged in technically difficult climbing; they complained of having only five days of good climbing weather (but this, says Washburn, is well above the average for Alaska!). Washburn rates the climb as much harder than that of Mt. Hunter, which was done a few years ago, both because of its greater technical difficulty and because the difficulties upon the latter mountain are continuous for only one-third the length of those on Mt. McKinley and moreover occur at a lower level, where the weather conditions are less severe.

In May a Canadian party made the first ascent of the N.E. or "Pioneer" ridge leading to the north peak (19,470 ft.) of Mt. McKinley. They followed the Muldrow Glacier (the first time this had been traversed since its great upheaval in 1956) to the 10,000-foot level and then swung to the right to the crest of the ridge to complete a very fine climb which had previously been attempted without success. Two members of the party, after they had descended to 14,500 feet, were flown out to the hospital in Anchorage, suffering from frostbite.

Later in May a party consisting of Warren T. Bleser, Don Gordon, Stuart Ferguson and Dan Davis, mostly from Seattle, made an attempt to reach the north peak by the north or Wickersham wall, an area which had not been entered since Wickersham's original visit in 1903. The plan was to follow the route up the right-hand side suggested by Bradford Washburn.² We quote the following from an account supplied by Warren T. Bleser:

After receiving thirty days' supply of food in an airdrop, we turned our attention to an icefall which was the main obstacle of our proposed route. It was fascinating work finding a route through band after band of ice-walls and seracs. The snow was so deep that many of the crevasses were filled in. Fixed ropes were installed on a couple of exposed traverses and on one very steep pitch.

Snowshoes were worn constantly on the climb. Gordon had a pair of small beavertails, while the rest of us used long trail shoes. We all agreed that the ideal thing is to travel in on a pair of trail shoes and then have a pair of beavertails airdropped for use on the steep stuff higher up.

² In the article cited above, pp. 78-9.

Two days later Camp II was established at 9700 feet. The location of the campsite was on a rather spectacular dome about halfway up the icefall. The second half of the icefall appeared to have more open slopes.

. . . It is snowing hard. Visibility is poor and differences in relief, even close at hand, are hard to detect. The formations of blue ice lend an eerie effect to the gray scene. Dan Davis and I had started out early, with light packs, to find a route through the upper part of the icefall. The slopes were steep and quite exposed. For the first time the snowshoes came off and step-cutting commenced. Now we are again traversing to the left, our snowshoes sinking into the deep powder. The intensity of the snowfall lessens momentarily, to allow us to make out two forms under heavy packs moving below; just as quickly they vanish. We do not find a route to the left and, after dropping our 25-pound loads at a cache which the others have made, we return to camp wet and cold.

. . . I am snug and warm in my sleeping-bag. We have now located the new camp at 12,000 feet. It has been snowing all night and this morning is still doing so. Gordon and I had found a more direct route up the upper part of the icefall. Now only one long steep pitch, which culminates at 13,000 feet, remains between us and the easy slopes leading to the summit. The tent is pitched on a platform cut into the gentle slope, forming a four-foot wall on the uphill side. The blocks of snow which were removed to form the platform have been used to build a wall around the downhill side of the tent for wind protection.

Stu Ferguson mumbles something about eight inches of snow falling in a half-hour, then pulls the drawstring closing the entrance of the tent and disappears into his sleeping-bag again. Sixteen days' food and all our extra gear is cached in an extra tent fifteen feet to the left of our main tent. Fifteen feet is not far to go for supplies; we can sit out a storm if we have to. I was contemplating a relaxing morning with a good book and my pipe.

Suddenly I am rolling and tumbling down the mountain, fighting to push off the weight that is upon me. Then, as suddenly as the thing started, it was over. Everything was black. Light returned as someone unzipped the cooking zipper in the floor of our Gerry tent. Three of us had ended up with our faces together right in front of this zipper. We climbed out into the snow in our stocking feet. Don Gordon had made his way out at the other end by a more conventional exit. Our first concern was to find our Korean boots. Once we had them on, Stu Ferguson headed down the slope, picking our scattered gear out of the snow and standing the things on end so that they would not be buried. The rest of us started to sort things out.

In originally picking the site for our camp we had decided that the ridge would be too much exposed to the wind. Because the slope above the camp was so gentle we had not been concerned about the avalanche problem. Actually, as later inspection showed, the slope was steeper than it had appeared from below, reaching a maximum dip of 25 degrees. A night of constant snowfall on such a slope, already covered with deep powder, proved to be just too much. The four-foot wall on the uphill side of the camp was a great help in preventing our being swept off the mountain.

We decided to traverse to a ridge a short distance away on the right and build a snow cave there. Our Gerry Alaskan tent was badly torn and the tentpole sheared off. We could not find the spare tent. We packed up our gear and moved out. One and one-half pairs of snow-

shoes were still missing, and the men without snowshoes had considerable trouble in making the short distance.

Three of us worked at digging out the snow cave, while Gordon went back to probe the area. He returned that night with the missing snowshoes, a \$400 camera, and a number of small items. The tent containing the sixteen days of food, both our climbing ropes, and a number of rolls of expensive movie film was still missing. Because none of these items had been found it looked as if the tent had remained zipped shut and was now buried *in toto*.

Next day a systematic probing operation was performed. Three feet apart, we each walked through the snow with a ski pole in one hand and an ice-axe in the other, sinking in up to our waists. We found the tentpole of the missing tent and followed its probable line of descent for some hundreds of feet. At the foot of this there was a drop-off, so that no hope of finding the food remained. We had less than four days' supply with us.

The expedition was consequently obliged to withdraw. But Bradford Washburn observes that the success of this party up to the time of the avalanche indicates that the wall is probably climbable by the route selected.

In the Canadian Rockies many climbs—new and old—were made possible because of the unusually fine weather. Some twenty people, in various parties and by various routes, climbed Mt. Robson. The Emperor Falls Ridge was done, for the first time, by Tom Spencer and Ron Perla from Utah; the difficulty of this ridge, in ordinary years, has always lain in the peculiarly unsound condition of the snow.

The 1961 Harvard Climbing Camp was held in the Coast Range of British Columbia, east of Mt. Waddington. Fourteen members were flown to Ghost Lake by B.C. Airlines on July 11 and seven more followed some ten days later. Base camp was established July 13 on the rock rib in the middle of the Tellot Glacier which had been used by parties in the early fifties. The next few days were spent consolidating camp and packing in the 2700 pounds of food and equipment which the airlines had dropped high on the glacier July 14. After preliminary training we began climbing some of the more readily accessible peaks: Shand, Dragonback, McCormick, Serra I. The continuing good weather suggested harder things, and on July 20 Craig Merrihue, Leo Slaggie, Hank Abrons and Chris Goetze left camp to descend to the Tiedemann Glacier and attempt Mt. Waddington. They encountered dangerously loose rock and difficult route-finding problems on their way up the Bravo Glacier; it took two long and tiring days to reach the Bravo-Spearman Col. They left high camp above the col about 8 a.m. on the 23rd and climbed to the summit via the southeast chimney, their progress hampered once more by loose rock. The descent was featured by a fog which prevented them from reaching high camp until the following morning. On their way down to the Tiedemann they met another party on their way up Waddington: George Millikan, Richard Millikan, Don Morton and me. A description of the horrors of the route was enough to make us change our objective; on July 28, accompanied by

Slaggie and Goetze, we made the long and enjoyable ridge climb of Mt. Munday before returning to base camp.

The next project was an ascent of Mt. Tiedemann, which, at nearly 13,000 feet, is the second highest peak in the range. Our anticipated route ran from a low snow col over several rock summits along the northern ridge, the top section of which was climbed in 1954. That year the Radiant Glacier had been attained by dropping down an icefall directly from the Tellot. But now the icefall seemed impassable and we had to look elsewhere. Accordingly, on July 29 Richard Goody, John Humphreys and Robin Hartshorne descended partway down a rock rib which divides an ice slope between Mt. McCormick and Shand. The route, which Goody and Humphreys completed the next day, was steep, but it led directly to the smooth snow of the Cataract Glacier, from which the Radiant is easily accessible. On July 31, carrying food and equipment sufficient for eight days, Craig and Sandy Merrihue, Hartshorne and I started down the rock rib. The descent took many hours, during at least one of which we almost buried ourselves under a pile of loose boulders. But we reached the Cataract and the following day crossed the Radiant and camped at the base of the ridge on Tiedemann. There we were joined by Goody, Humphreys, Don Morton and Dennis Dunn, who had descended the rib and made our camp in a single day. Their plan was to descend to the Scimitar Glacier and reach the summit of the snow peak of Waddington via Fury Gap. We wished them luck and, on August 2, still with full packs, began the ridge climb in front of us. We traversed right of the first rock peak, moving over scree, snow and then rock to a beautiful campsite on a snow saddle beneath the second rock peak, Damocles. We then spent a frustrating day trying to find a route around this obstacle. On August 4 we found one: over the bergschrund and up steep snow to some rock, then a traverse to the right-hand skyline. An hour on loose easy rock brought us to the long snow ridge which passes over a rocky peak, descends and finally leads to the true summit. On top shortly after three, we were delighted to see the two ropes of two on Waddington reach the snow summit. They had moved fast and had a fine trip. The next day a storm hampered all climbing, but we left high camp and were back on the Tellot a day later. The ascent of Tiedemann was repeated on August 6 by Gordon Benner, Ted Hallstrom, Hank Abrons and Chris Goetze.

Meanwhile several interesting climbs had been made from base camp. On July 31 two parties met on top of the very steep Stiletto Needle: Dennis Dunn, Ted Hallstrom and Charley Bickel made the ascent from the Serra I col without using direct aid, and Hank Abrons and Richard Millikan established a fine new route straight up the Tellot Glacier side of the needle. A few days later, encouraged by excellent conditions on the Serra ridge, Bickel and George Millikan traversed the Tiedemann Glacier side of Serra III and, with the aid of a bivouac, made a first ascent of the peak between Serras IV and V. They returned to camp via Serra IV, climbed only once previously. On August 4 Hallstrom and Richard Millikan left a high camp on the Tellot at 4 a.m. and were on top of Serra III three hours later. They then found a traverse which led by an easy shelf all the way to the Serra IV-V col. Here they spent several hours but found the slopes of Serra V quite unpromising. They retreated over the summits of Serras IV and III.

Among our other climbs: on July 23 George and Richard Millikan, Ted Hallstrom and Don Morton made the third ascent of Serra II, the first via a subsidiary ridge which descends to beneath the II-III col. The route is not recommended—too much loose rock.

On August 8, the last climbing day, Dennis Dunn, George Millikan and I ascended the Harvard Claw from the south by traversing around Claw Peak. This is an enjoyable climb on very fine rock. Some moderate Class 5 pitches.

In general we were highly impressed with the region. We found the glaciers dangerously crevassed, the rock often excellent but sometimes quite poor and treacherous, and the weather amazingly good: only one bad day out of thirty. This abnormality doubtless made much of the climbing significantly easier than it has been in the past.

STEVEN JERVIS

In the Alps, the south face of Mont Blanc was the scene of a tragedy involving seven of today's very best mountaineers, three of them Italian and the other four French. Two parties thus composed, coming up from opposite sides by means of the aerial tramways, met accidentally at the Col de la Fourche bivouac-hut on Sunday evening, July 9, each having as objective a first ascent of the Great Fresney Pillar. This is the central one, and the largest, of three steep rock buttresses which rise from the head of the Fresney Glacier to the Brouillard Ridge a short distance to the left (west) of where the ridge meets Mont Blanc de Courmayeur. The two flanking pillars had been climbed; the central one was considered about the last great problem in the Mont Blanc massif. It requires 2000 feet of very difficult climbing, with some passages of the most difficult "free" climbing and some demanding artificial methods—all this at an elevation, for the most part, of over 13,000 feet.

Agreeing to cooperate rather than compete on this climb, the two parties joined forces, with the Italian Bonatti, an ace professional guide, as the acknowledged leader. One of the other Italians, Oggioni, was also a professional; the third, Gallieni, who had engaged these two as his guides, was a very competent amateur. The four Frenchmen—Mazeaud, Kohlmann, Guillaume and Vieille—were all amateurs, with splendid climbing records.

On Monday, by a continuous and not too easy climb of twenty-four hours, the combined party reached the Col de Peuterey (between the Aiguille Blanche and Mont Blanc de Courmayeur) and traversed west beyond it to a first open bivouac on the wall of the pillar. The weather was good, and it remained so throughout most of the following day (Tuesday), allowing the climbers to make rapid progress. At 5 p.m. they had reached a point only 250 vertical feet below the summit of the pillar; if that stretch could be climbed they would have only some 600 feet more of elevation, and no great distance, over the summit of Mont Blanc de Courmayeur to that of Mont Blanc itself, whence Bonatti was confident that they could descend by one of the easier routes in any weather. But at that juncture a violent thunderstorm suddenly developed. According to Mazeaud, inferno broke loose. Thunder rolled continuously, and each time they attempted to plant a piton in the wall they received an electric shock. Kohlmann suffered most; being deaf, he



Robin Hartshorne

MOUNT WADDINGTON SEEN ACROSS THE TIEDEMANN GLACIER FROM CLAW PEAK

High camp was on the snow plateau just left of center



Robin Hartsborne

VIEW ACROSS THE RADIANT GLACIER FROM COL BELOW MOUNT MCCORMICK

was wearing a hearing aid, which functioned as a lightning conductor.

Under these circumstances a halt was imperative. The party roped down to a small ledge and resolved to pass the night there, judging that so violent a storm, in midsummer, could not last more than a day or two, whereupon the climb might still be finished. And they were unwilling to face the long descent over difficult rock and ice except as a last resort, comparing such a retreat to a redescent of the Eiger North Wall.

But they were in this bivouac for three nights and two days, for although on Wednesday morning the storm seemed about to abate, it soon recommenced, bringing immense quantities of fresh snow. Bonatti dwells on their acute discomfort during this period—cramped unalterable positions in the little bivouac tents, nothing hot to eat, and nothing to drink since the cookers for melting snow would not burn inside the stuffy tents for lack of oxygen. They tried to relieve their thirst by constantly sucking little balls of snow.

On Friday morning, although the storm still continued and visibility was nil, snow and cloud meeting to form an opaque wall, they made the necessary decision to descend, having no more food and no hope of completing the climb. To regain the Col de Peuterey required twelve hours of nearly continuous roping down. Bonatti went first, to fix the ropes and select the landing places; he describes his impressions on launching himself, at each rappel, into the gray void, without knowing where he would fetch up. Having reached the end of the rope he would call out repeatedly for the next man to come; eventually the rope would shake, and after a considerable interval a dark spot would appear, as Mazeaud came to join him. Finally, wet and freezing, they judged correctly that they had reached the foot of the pillar, and thence, in snow up to their waists, waded over to the Col de Peuterey for a fifth bivouac, under frightful conditions. The wind was still howling and the snow falling; all were shivering with the cold and in a mood of despair. Kohlmann seemed to be the worst off, showing fingers that had gone white. Here occurred what was probably a fatal incident. With the thought that Kohlmann might massage his fingers with some of the denatured cooking alcohol, Bonatti passed him the flask; Kohlmann, however, perhaps thinking that it was brandy, raised the flask to his mouth and took a swallow before he could be prevented. This, it is suggested, may well have induced his subsequent insanity.

The next morning (Saturday), with the storm still continuing, they made an early start to descend the dangerous wall (the so-called Grüber rocks) flanking the ice-fall of the upper Fresney Glacier—the object being to reach this glacier lower down, cross it to the Innominata Ridge, and so down to the Gamba Hut, the nearest shelter. All were on one rope, with Bonatti leading, Mazeaud fourth, and Guillaume last. But in the course of this descent Vieille collapsed, at the end of his strength, and expired within half an hour, while all remained gathered around him. The others then continued the descent to the glacier, where now, luckily, the clouds gave way for a period and Bonatti could see his way through the many crevasses toward the couloir leading up to the Col de l'Innominata, on the Innominata Ridge, whence they would have a relatively short and easy descent to the Gamba Hut. Expecting to reach the hut that evening, the party had jettisoned their sleeping-bags and

bivouac tents, in order to travel as light as possible. But it was evening when Bonatti and Gallieni started placing pitons on the difficult ascent of the couloir, and now suddenly Guillaume's nerves gave way under the prolonged strain. Losing all control, he detached himself and disappeared into the mist and darkness. It seemed quite useless to make a prolonged search for him under such conditions, and by 8 o'clock the others were gathered at the foot of the couloir, which had now been provided with a fixed rope placed by Bonatti and Gallieni, above. As Oggioni was about to start up, Kohlmann suddenly grabbed the rope and went up it hand over hand, in an astonishing display of physical strength. It was clear that he too was out of his senses.

It was now Oggioni's turn, and Bonatti tried to pull him up; but Oggioni, at the end of his strength, could do nothing whatever to help himself and the attempt failed. Bonatti then called down to Mazeaud, the only other one left, to remain with Oggioni while he went as quickly as possible down to the Gamba Hut and sent up the rescue party which was due to be there, as the climbers had been gone beyond the allotted time. As it turned out, however, the two—Mazeaud and Oggioni—were out all night on this, their sixth bivouac, without any equipment for such a thing; and shortly after 2 a.m. Oggioni succumbed.

Meanwhile Bonatti and Gallieni had roped Kohlmann between them at the top of the col and started down the ridge toward the hut. But, on the initial steep and icy slope Kohlmann, completely out of his head, became a great source of danger. He would simply slide down on his back, with his complete weight on the rope, and then continue to hang on it when it had run out its full length, so that Bonatti, as last man, had to manage his own descent while still supporting Kohlmann. Then, at the foot of this slope, Kohlmann suddenly threw himself on Gallieni and knocked him down, afterwards turning upon Bonatti. In order to protect themselves from the madman, Bonatti and Gallieni stretched the rope against each other, keeping him at a distance between them. But they could not drag him thus to the hut, and were losing precious time. So one by one they managed to free themselves from the frozen rope and ran for it, escaping into the falling snow. It was now completely dark, but Bonatti succeeded in finding the hut, thanks to his great familiarity with the region. The rescue party was there, asleep (it was now 3 a.m. Sunday), but they set out at once, in the darkness. At 5.30 they reached Mazeaud, still alive, and brought him in. The body of Kohlmann was found 600 feet from the hut, whither he had succeeded in descending, and later those of Oggioni and Guillaume were recovered.

Bonatti and Gallieni were cared for in the hospital at Courmayeur, where they soon recovered from the physical, if not the mental, shock. Mazeaud was taken to a hospital in Lyon in serious condition, but it seems that he was spared any amputations of frozen members. (*Die Alpen*, September 1961, and *Paris Match*, July 29, 1961. The latter contains the personal accounts of Bonatti and Mazeaud, with many further details. For a copy of this journal we are greatly indebted to our Corresponding Member, Mrs. I. A. Richards.)

According to later reports in the *London Times*, the central Fresney Pillar was afterwards successfully climbed, in August, by two parties—one consisting of two Englishmen and the other consisting of an Italian with a French guide.

Miscellany. In connection with a tragic accident, in March, on the east wall of the Watzmann (near Berchtesgaden), in which three Austrian climbers lost their lives in an avalanche, American Army fliers rendered a unique service. A prolonged storm had so covered the wall with a heavy blanket of snow that aerial search for signs of the missing men became impossible. Hereupon the American fliers, in helicopters, flew in very close to the mountain, in order that the wash from the rotors might cause the new snow to slide away. *Der Bergsteiger* for May publishes two pictures (pp. 464-5) showing the great success of this operation, and (p. 470) warmly acknowledges its help in enabling the aerial search to continue. (The bodies, however, were not found until seven weeks later.)

On August 29 a jet fighter of the French Air Force, on a low-altitude training flight over the Mont Blanc massif, struck and severed the traction or secondary cable of the aerial tramway which stretches for three miles across the so-called Vallée Blanche from the Aiguille du Midi, on the French side, to the Col du Géant, on the Italian side, with only a couple of intermediate supports. The shock at the point of severance was so great that two groups of three cars, each holding two or three persons, rammed each other and three of them bounced off the primary or carrier cable and crashed to the glacier 600 feet below, killing their six occupants. With the traction cable broken the entire system was now at a standstill and thirty-three other cars, carrying some eighty tourists, were left hanging high over the peaks and glaciers. Rescue operations proved to be extremely difficult, but were carried out with great technical skill. Before nightfall (the accident occurred at 2 p.m.) some passengers were removed by helicopter, while at the Italian end guides went down the cables to the nearest cars and managed to lower some thirty people to the snow 100 feet below. More than forty persons, however, still remained out of reach, with the prospect of a cold night before them. But engineers now began to wind in what was left of the traction cable on a huge winch at the French end, and very slowly, at first at the rate of only 600 feet per hour, the cars began to move toward both ends. At 1 a.m. the first ones reached the Aiguille du Midi, but it was 8 in the morning before everyone had been rescued, without further injury. (*London Times*)

On September 24 three Frenchmen, all experienced parachutists, landed on the summit of Mont Blanc by jumping from a plane flying 600 feet above the mountain.

The renowned guide Joseph Knubel has died, at the age of 81. He became famous chiefly through the magnificent climbs made with Geoffrey Winthrop Young, in whose book "On High Hills" high tribute is paid to him.

At the Swiss Health and Sport Exhibition in Berne this summer there was not only an artificial ski hill, some 35 feet high, with synthetic snow and a miniature lift, where visitors could show their stuff (clothing and equipment being available), but there were also two rock-climbing cliffs, 30 and 50 feet high, provided with overhangs, "noses", a chimney, smooth slabs, etc., and well furnished with pitons and other belays. Guides were on hand to give those who wished elementary instruction in climbing technique and the use of the rope. The cliffs were constructed by stretching wire netting over a steel frame-

work and covering the whole with plaster. Promoters of the exhibition claimed that it would serve as a useful first step in teaching competence and caution in the mountains. (*Die Alpen*, April and June issues.)

ROCK CLIMBING

Wheeler Mountain Revisited. James Maxwell's account in APPALACHIA, June 1948, of climbs on Wheeler Mountain (21 m. north of St. Johnsbury, Vt.), aroused our interest; accordingly, on Sept. 17, 1961, a party of three (Dan Brodien, A.M.C., Roger Damon, A.M.C., and Andy Fisher) proceeded to the base of the cliff. A previous reconnaissance, in company with wives and children of talus-hopping age, had revealed the path described in the previous article to be very obscure. The best approach, after proceeding either by boot or by car to the height-of-land one-quarter mile east of the Wheeler farm (old logging road on south (R) provides parking for one or two cars), is to follow a very short logging road north (L) to its end past a clearing on the right. Bear right through open woods until the Wheeler farm boundary (trees and boulders marked with red) is reached. Follow boundary to talus slope, which leads directly up to base of the cliff.

Our previous reconnaissance had also shown us a choice of two routes: either following a band of vegetation a few steps left (believed to be the Maxwell route), or frictioning directly upwards to the base of a vertical wall, in either case arriving at a broken area offering numerous belay stances. The former was taken on the reconnaissance; this time we chose the friction lead. It proved to be about 90 feet to the base of the vertical wall and, since the upper half was close to maximum friction angle, two pitons were used for protection. A 20-foot friction traverse followed left to the righthand edge of the broken area, where a belay stance was chosen (piton for anchor). At this point we departed from the Maxwell route; a short lead was taken up right through birch scrub to the top of the wall, in a sheltered depression below an overhang. The party was assembled at this point so that leading could be juggled and packs could be roped up the next little pitch—one that caused exclamations of surprise by the member of our rope who had not been on the reconnaissance. Leading right up a wall 20 feet to the underside of the overhang, using a chockstone for protection, and stepping right onto a 3-inch ledge, we were just below a tremendous cleft in the rock about 2 feet wide, 20-30 feet high, and 20 feet in depth. It was partially roofed over by a large boulder. A muscular pull-up brought us to the floor of the cleft, where we again assembled and spent some time in exploring and picture-taking. By going to the rear one can drop down to bedrock and see daylight to left and right, as well as considerable evidence of visitations by wildcats.

We went out from the rear of the cleft, by means of about 20 feet of chimneying, to emerge on a flat grassy spot (cairn). At this point, the highest reached in the previous reconnaissance, we were to find that the hard climbing was over, at least as far as getting to the top was concerned. Moving simultaneously up right 60 feet, keeping to the left of the unbroken slab area, we stopped on a bushy flat which led to a long V-gully leading upwards to the left. Again juggling leaders, we at-



Austin Macauley

DEMONSTRATION OF ROCK-CLIMBING RESCUE

Larry Carter as victim

(See p. 538,



Bradford F. Swan

MOUNT WASHINGTON FOOT RACE

John Kelley finishing at the summit
(See p. 539)



Raymond W. Evans

CANADIAN LYNX ON MOUNT CLINTON

November 1960

tempted a route up right across the face of the old slide near the top, following a vertical wall. However, the lead petered out and our leader advised withdrawal after we all came up to him for a look around. The two pitons used for protection on this rather thin 50-foot lead were retrieved.

We then turned to the long V-gully, which gave us an easy 120-foot shot at the summit ledges. It proved to be moderate climbing, using friction and layback in the first 50 feet. After crossing behind a tree



the lead continued directly upward over moderate rock on the left side of the gully, ending on the nose of a rock spur just below the summit ledges.

The trail to the summit is readily found; it has been recently marked with white paint. It leads over the summit down into woods northeast and emerges on another rocky prominence, where members of the G.M.C. have provided a summit register. The view from this point is spectacular, embracing a panorama from Willoughby Lake on the left to the Franconia and Kinsman ranges on the right, with excellent views of Mt. Pisgah's cliffs.

The return route followed the ascent in general; successive rappels of

120, 60, 120 and 60 feet, with some interspersed scrambling, brought us to the base of the cliff close to our starting point. We kept to the left of the cleft boulder on this trip, as we had found on our reconnaissance that the gully to the right offers few natural rappel points.

Again, the entire climb can be done in three hours; we took more because of poking around and avoiding the obvious routes until all other avenues were exhausted.

The trail to the summit is well cleared and well marked. It starts across the road from the Wheeler farm (sign in field) and leads up over open ledges and through woods to the top of the main summit. Length is approximately one-half mile. Now that we have explored some of the features of this face, next time we shall arrange to be met on the summit by our swarming broods, bearing refreshments!

ROGER H. DAMON, JR.

Rock-Climbing Demonstration. On July 29, members of the A.M.C. Mountain Leadership Committee under the leadership of Bill Putnam, ably assisted by the staff of the Cannon Mountain Tramway, staged a rock-climbing and mountain rescue demonstration on the lower portions of Eagle Cliff in Franconia Notch. Our efforts had to be restricted to the cliffs which were visible from the field near the ski jump where the crowd gathered. There a tent was erected where the spectators examined mountaineering knots, climbing clothing and equipment and, during periods of inactivity on the cliff, looked at climbing movies. There too the stentorian public address system blared out through the peaceful Notch, carrying George Hamilton's description of the hut system, Fran Belcher's exposition of equipment and, during the climbing and rescue operations, a commentary on what was happening above on the cliffs, given by me for the morning show and by Bill Putnam in the afternoon.

Six climbers, Bert Hirtle, Dr. Harry McDade, Dan Brodien, Larry and Peter Carter (aged 12 and 13 years) for both exhibitions, and Bill Putnam in the first and I in the second, reversed the usual order and first descended *en rappel* to the base of the cliff. We turned around immediately and climbed back up again. Near the top Larry, the lightest to transport, "broke" his leg (the left in the morning but the right one in the afternoon). The special rock-climbing rescue stretcher was miraculously produced and in a comparatively short time Larry was strapped on and lowered back down the cliff. The rain held off until the very end of the second show, when Larry was only twenty feet from the bottom.

A large number of tourists and spectators turned up and nearly all gratifyingly seemed to stay to watch the whole show. We hope they benefited from the words of wisdom offered them about how to climb safely under the tutelage of such a group as the A.M.C. The climbers certainly gained from another practice session in evacuation of an injured climber from high-angle rock.

ADAMS CARTER

CLIMBING IN GENERAL

Foot Race to Summit, Mt. Washington Carriage Road, August 13, 1961. Slightly over 100 runners registered for the renewal on August 13, 1961, of the road race to the summit of Mt. Washington over the century-old Carriage Road, this year celebrating its 100th Anniversary.

Some of those who had registered did not make it to the starting line. But a most interesting fact of the race was that, of those who did start, only three failed to make the summit. Sunday, the 13th, proved to be the coldest day of the summer, a fortunate circumstance for the participants since most of the runners, experienced marathoners, are used to running during the winter months. The temperature at the summit when the runners arrived there was 34-36 degrees, with a brisk breeze blowing from the northwest of about 35-40 m.p.h. The number of spectators observed standing along the racecourse above treeline was quite limited.

The well-known marathoner, John Kelley, schoolteacher from Connecticut, was the pre-race favorite. Kelley lived up to advance notice by simply running all other contestants into the ground. He took over the lead just below the two-mile mark on the road and for the balance of the race was never headed. His steady pace, regardless of the degree of slope, earned him an increasing lead as the race progressed; he broke the old record by some eight minutes. The first four to complete the race all finished ahead of the previous record held by Frank Darrah of Manchester, N. H., of 1 hour, 15 minutes, 27.4 seconds.

Tommy Deans, hutmaster at Greenleaf this year, was the lone entry from the Hut System personnel. Tommy finished about midway in the group of approximately 80 runners in the good time of 1 hour and 47 minutes. Paul Roche of the Trail Crew also completed the race creditably and won the medal given to those who finished in less than two hours.

The race was sponsored by the A.A.U. Many of the spectators voiced the hope that the race will become an annual event.

GEORGE T. HAMILTON

Connecticut's Appalachian Trail Marathon, April 28-30, 1961. For the second consecutive year the Trails Committee of the Connecticut Chapter sponsored a marathon covering the 55.75 miles of the Appalachian Trail in Connecticut. This year's event was run in relays throughout the weekend of April 28-30. Much planning was involved, since leaders had to be chosen in advance, a base camp set up, and schedules for the individual teams arranged. The purpose of the marathon was twofold: to acquaint members with sections of the trail previously unknown to them, and to supply the Trails Committee with information about trail conditions. This weekend was chosen because, nature cooperating, there would be a full moon and the wildflowers in full flower.

The beginnings of the weekend were not auspicious; those who arrived at the base camp in Mohawk Forest on Friday night found soggy conditions and were happy to use the Bessie Shelter. The participants

were cheered by visitors busy with flash cameras and by a roaring campfire.

On Saturday morning Team I started, a half-hour late (8.30), from the Indian Burying Ground in Kent, amidst the popping of balloons. Across the New York line a stick was cut and a bottle of water filled from a nearby stream. The traveling was wet, but the three members enjoyed the journey nonetheless, particularly the falls of Grapevine Brook and the white violets and saxifrages. In the middle of the trek they were met and refreshed with hot coffee.

Team I met Team II at Macedonia Brook State Park, slightly late because of the original delay and the weather. Stick and bottle were passed from captain to captain and the "secret message" whispered. Team II, with seven members, strove valiantly against the double handicap of time and weather and won out, meeting Team III exactly on time at 8.00 p.m. at Cornwall Bridge. There was little time to observe Nature's beauties, but the madly rushing Housatonic was admired and traces of a large herd of deer noted.

Team III was very conscious of the qualifying adjective in "Dark Entry" as it started its trek. Flashlights and closed ranks were in order for its nine members. The whiteness of the rushing brook contrasted sharply with the dark ravine. Soon, however, the full moon broke through here and there, and by the time they reached the Cathedral Pines it was shining clearly.

Soon after midnight Team IV was waked at base camp. Its three members had a full moon nearly all the way on their journey to Dean's Ravine, where they were welcomed by Team V and a hot breakfast.

Only three braved the 8 a.m. deadline for the trip through Dean's Ravine, over Barrack Mountain, to Route 41, where they were met by a large crew of participants and well-wishers.

Team VI with ten members clambered over Lion Head and Bear Mountain and wound up the marathon at Sages Ravine, in Massachusetts, by dumping the bottle of water into the stream and repeating a nearly accurate version of the "secret message".

Many of the participants returned to Northwest Camp for a delicious pick-up supper and final celebrations. Counting visitors and assistants, a total of forty-five members and guests participated in this event, which we hope to repeat next year.

SHELTON B. HICOCK

Flower Walk on Mount Washington. After four months of teaching and lecturing [at Barnard College] I was ready for a climb, but American hospitality had seen to it that I wasn't exactly fighting fit. (Oh, those Southern fried chickens! Oh, those New York martinis!) So I was delighted at the prospect of staying with the Underhills at Randolph, and relieved when Miriam reported that my visit would fit in nicely with the Flower Walk of the Appalachian Mountain Club. That suggested frequent pauses for botany, photography, and breath. And so it worked out on the first day of my visit, when the Underhills took Isabel Blodgett and myself on a preliminary reconnaissance up to Glen Boulder and did everything to ensure that there would be alpine flowers for the flower walk, short of actually planting them. We would

walk for ten or fifteen minutes, then pause at a trillium or Canada mayflower, one of us would hold the flashlight for Miriam to photograph, whereupon with legs rested and lungs refilled we would start up the next little stretch.

How different on the day! I approached the rendezvous at Pinkham Notch with that slight apprehension one has when launched into a group of strange climbers, especially in another country. You wonder if they aren't all tigers, ready to gobble up the miles and the feet, supermen who never need a rest—while you, puffing and grunting a hundred miles behind, or holding up the traffic on a narrow trail, will give them an image of British decadence. Nor was my morale really improved when Miriam very disingenuously introduced me all round as "Mrs. Roberts, from London"—with the clear implication that I had come expressly for the occasion, probably from Kew. So my botanical illiteracy was about to be exposed too! I scrutinized my seventy-one companions warily as we were checked off with Al Robertson's list: they *looked* human, not superhuman—they even looked very much like a group setting out from Wasdale or Pen y Gwyrd, though perhaps the range of dress was a bit more enterprising. I particularly admired a costume of high boots, red tights and navy shorts, topped by a hat with mask and veil which recalled pictures of Henriette d'Angeville on her ascent of Mont Blanc in 1838. As we started up through the insect-infested woods, I could see the wearer had a point.

The 72-piece caterpillar—with Peter Ward to set the pace and several stout lads on the alert for lame ducks to be escorted down—wound steadily up the Glen Boulder Trail, and this time there were no agreeable pauses: all that the woodland flowers got from us was a look in passing. Admiration and photography began when we came out of the trees for the first time and rested on the slabs; here the first alpines were spied, and there were glad cries and exchanging of names over cushions of alpine azalea and clumps of *Rhododendron lapponicum*. Sweaters were pulled out of rucksacks, windcheaters donned, for hot and sweaty as it had been among the trees, now we were met by quite a sharp wind. Rain started as we were about halfway up to the next belt of trees, beyond the Glen Boulder; once in the trees we were fairly sheltered, but the minute we came out onto the open ridge, it was a different world. We felt the full blast of a cutting wind which lashed rain, and sometimes hail, into our faces. I had gloves in my rucksack, but just couldn't stand the thought of stopping and fumbling with straps, so just battled on, one hand clutching an Underhill plastic cape and the other stuffed for warmth into a trouser pocket. Such an abrupt transition from one zone to another—from a pleasant walk in the wet to quite a stormy struggle—took me back at once to the Cairngorm Mountains of my native Scotland, with their quick changes from sheltered corrie to exposed plateau. (I have been colder, wetter, more buffeted by wind in the Cairngorms in August than ever I have been in the Alps.) So it was all quite familiar, though, just at this moment, quite beastly. A boy of nine or ten whimpered with pain as he struggled with his father against the wind just ahead of me; I was thankful that for once I had only myself to look after. Miriam appeared out of the rain, saying that if I wanted to go back, she'd see me down; I refused

her generous offer, feeling rather tough, but was sure she'd find others who'd like nothing so well. Soon, as we battled our way from cairn to cairn along the summit plateau, the wind seemed to drop a bit, and the nine-year-old perked up. Again it was a familiar experience, trudging along a stony plateau, with visibility down to about ten yards; but there were far more cairns and sign posts than in the Cairngorms. Now the track turned down to the Lake of the Clouds, and with journey's end in prospect, if not in sight, I realized just how wet I was, as well as cold. The first person I saw when I reached the hut, a few minutes after the first group, was the nine-year-old, as perky as possible in dry clothes. Someone thrust a mug of cocoa at me; it seemed to ooze warmth down to my toes. Luckily my rucksack had been protected by the plastic cape, and my spare clothes were dry, so very soon I was warm and most content, ready to press cocoa on the next wave of arrivals and help them to find bunks and take off wet clothes. Isabel Blodgett came in shivering, but "Invigorating!" was the word on her lips. And eventually all seventy-two were in the hut except for one, a man with a bad heart, who had turned back at the treeline. Appalachian flower-lovers may be human, but they're quite tough.

Not everyone had been lucky in keeping spare clothes dry (and there was a group of high-school girls, not of our party, who seemed to have filled their sacks with hair-curlers and hairnets to the exclusion of sweaters and pants). So skirts were improvised from blankets, the old clothes box ransacked for sweaters and socks, while the hut crew most nobly raided their own wardrobes to succor damp and shivery climbers. One member of the crew had gone off that weekend to take his master's degree at Dartmouth, leaving behind three well-pressed pairs of pants which his colleagues distributed to the needy; I hope he saw the point of their magnanimity when he came back. The hut crew excelled themselves with a dinner of soup, roast turkey and pie; and after some pleasant chat about flowers, mountains, huts and the *Manchester Guardian Weekly* (of which there were three copies in the hut that evening), somehow everyone was bedded down.

Next morning was fairly clear, and a peak-bagging impulse took me up Mt. Monroe before a splendid breakfast; afterwards, while Dr. Harris was conducting a botanical seminar near the hut, I went off with a few others to climb Mt. Washington. We got into the mist again, and blundered about trying to identify the various buildings (here it was Snowdon I was reminded of); then, pleasantly chatting of Cambridge (Eng.), we came down by the Tuckerman Trail and Davis Path to join the main body of the party at the head of the Boott Spur Trail. Now, on the downward path, there was scope for photography; as I came upon two young women training their cameras on a clump of flowers—"Look! there are *three* kinds here!"—I heard myself explaining to them what the three kinds were. I must be feeling quite at home. Indeed, by the time we were down at Pinkham Notch, drinking those wonderful cups of tea, it seemed as if I'd belonged to the Appalachian Mountain Club for years.

JANET ADAM SMITH
(MRS. MICHAEL ROBERTS)

Four-Thousand-Footer Club. New members are:

1960, October: Paul R. Bernier, Richard Heywood, C. W. Spangenberg, Kathleen Spangenberg, Frederic L. Steele, Wayne C. Taft, Wayne Wittanen.

November: John C. Haartz, Jr.

December: Stuart Broderick.

1961, July: C. Francis Belcher, Audrey Broderick, Alan S. Chickering, James W. F. Collins, Conrad F. Frey, Stephen I. Harriman, Robert E. Lennox.

August: Peter G. Ballou, Lois R. Booth, Robert P. Booth, Roger LeB. Hooke, Edwin L. Hubbard, Edgar A. Martin, Eric Schmidt, Allen A. Smith.

September: Ashley S. Campbell, Jr., Shirley H. Howker, Elizabeth K. Jacobs, John K. Jacobs, Lea S. Luquer, Ingeborg Lock, Priscilla Robertson, George A. Speers, Charles M. Swift, Jr., Thomas Trenaman.

October: Janet Buckingham, Tessie N. Connelly, Roger H. Damon, Jr., Elmer E. Jones, Mary B. Sawers.

Eric Schmidt, 10 years old, is now the youngest person to have completed the 4000-footers.

ALBERT S. ROBERTSON

Mt. Adams a "Holy Mountain". During the past year and a half several parties from fairly distant places have appeared from time to time at Pinkham Notch with the expressed wish to climb Mt. Adams—and no other. These parties have come from New York and New Jersey, and from Michigan and Canada. The exclusive concern with one particular mountain naturally awakened the curiosity and interest of local climbers, especially when it became known that the visits were in the nature of pilgrimages undertaken by members of an organization called the Aetherius Society, having its main headquarters in London and subordinate American centers in Detroit and Los Angeles. Miss Edna S. Spencer, secretary of the Detroit branch, has prepared the following account of the nature and purpose of the Society, and of the reason for its interest in Mt. Adams. APPALACHIA assumes no responsibility in this connection beyond stating our conviction that the persons concerned are sincere in the beliefs expressed. We publish this as a matter of general interest.—ED.

On a cold, snowy day in March 1960 two Englishmen and a Belgian woman wended their way northward from New York City into the wintry beauty of the White Mountains, headed for the Presidential Range. Arriving in Randolph, N. H., they stopped at the home of Mr. and Mrs. Underhill to inquire about climbing conditions and trails.

After renting snowshoes from the Appalachian Mountain Club Camp at Pinkham Notch, next morning they began the ascent of Mt. Adams along a trail already broken out by the Underhills. Unfortunately, the leader of the trio soon suffered excruciating pain from his hip. Yet they continued upward.

Some distance from the summit, the leader left his two companions and proceeded painfully alone to a designated spot. Returning shortly,

he and the other two wearily started the descent midst the cold, brilliant beauty of the frosty night now surrounding them. A giant step had been taken in a great Cosmic Plan designed to eliminate forever from earth war and greed, ignorance and old age, famine and fear.

The man who climbed towards Mt. Adams on March 15, 1960, was George King, an expert on metaphysics and spiritual science as well as the field of flying saucers. His companions were Keith Robertson and Monique Noppe.

Through a set of extraordinary circumstances, Mr. King in 1954 had received communications from people on other planets¹ and had been taught an exact mental discipline enabling him to perform the exceedingly difficult feat of tuning into, and translating into sound, messages beamed to him from vast Intelligences from other planets in our solar system who are working tirelessly on behalf of our ailing world. He was also taught how to make his body a "battery cable" so that he could withstand tremendous spiritual energies which were soon to be deposited in certain mountains, designated by the Space People, throughout the world.

When Mr. King was alone on Mt. Adams on March 15, 1960, a great Cosmic Master from the Planet Mars, in a spacecraft referred to by terrestrials as a "flying saucer", beamed spiritual energies into Mt. Adams, making it forever a Holy Place. The body of Mr. King was needed as the conductor. Thus was Mt. Adams charged with spiritual energies so that people on earth could channel out the great healing energies resident in it by praying unselfishly on it for others.

Mt. Adams was the twelfth mountain to be charged by the Space People for the benefit of Earth-man. Two mountains had already been charged in California—Mt. Baldy in the San Antonio Range east of Los Angeles, and Mt. Tallac in the Sierra Nevada Range on Lake Tahoe. Shortly, Castle Peak in the Rocky Mountains near Aspen, Colorado, was to be charged. Nine mountains had previously been charged in England. Two were to be charged in Australia, one in New Zealand, one in Africa, and two in Europe.

Since the atom bomb was dropped on Japan, the newspapers have made tongue-in-cheek, and occasionally straight-forward, references to objects seen in the skies over the earth, tabbed "flying saucers". Authentic sightings of these spacecraft from other planets have intrigued many serious-minded people throughout the world who have made a study of them. The Air Chief Marshal of Britain, Lord Dowding, addressing a meeting of the British Flying Saucer Bureau, strongly refuted the theory that flying saucers are of terrestrial origin. Both the Brazilian Navy and the Brazilian Congress have reported positive evidence of the existence of these spacecraft, and photographs have been released of flying saucers taken at the Island of Trinidad aboard an IGY ship. These are only two of many reliable sources that have proclaimed the existence of spacecraft in our skies of such astounding maneuverability and speed that they could not possibly be of terrestrial origin.

The great Beings manning these spacecraft can, with their advanced

¹ See *Cosmic Voice*, Volume 1, pp. 34-37, and *You Are Responsible*, by the Reverend George King, pp. 19-23; both published by the Aetherius Press, Aetherius Society Headquarters, 757 Fulham Road, London S.W. 6.

spiritual wisdom and their vastly superior scientific knowledge, make geophysical, meteorological and metaphysical surveys of our earth and accurately predict where and when earthquakes, hurricanes, floods, wars, economic collapse, and other such calamities will occur if the causes (our wrong thought and action, our failure to follow the Laws of God, plus atomic experimentation) are not stopped. Even more important, they can with their miraculous scientific know-how prevent or alleviate catastrophes now imminent—if people on earth will cooperate with them. They have the ability to do it without our help, but under the Laws of God they cannot save us from our own folly unless we work with them. Already they have performed amazing “miracles” on behalf of Earth-man because some people on earth gladly cooperate with them.

Because they cooperate with the Laws of God, the people inhabiting other planets in our solar system enjoy ideal living conditions. They have no crime, no war, no disease, no old age, no famine. They have absolute control over their weather. They travel throughout the galaxy giving service. They know the history of the earth from time immemorial. They are referred to in our holy books. These wonderful people have been extending their hand of friendship and offering their priceless wisdom to Earth-man throughout the centuries. Since we began atomic experimentation, they have intensified their appearance in our skies because their exceedingly sensitive instruments have revealed that the effects of radio-active fallout are many times more injurious than our crude instruments show.

They arranged to have organized on earth the Aetherius Society, founded in 1956 by Mr. King. Seven objectives were given the society. One of these, called by them “Operation Starlight”, was the charging of key mountains throughout the world.

“Charged” mountains, referred to by the Space People as “cosmic batteries” or “new age power centers”, are one of the means devised by the Cosmic Masters to help transform our present chaotic world conditions and bring true peace and enlightenment—if Earth-man releases the spiritual energies in these new age power centers by praying on them unselfishly for others.

The Cosmic Masters from Mars and Venus, speaking about these cosmic batteries, have stated:²

It is of great and vital importance to Terra (the Earth) that the Power now lying within the . . . Cosmic Batteries . . . be tapped and used for the benefit of Terra as a whole. These Cosmic Batteries have been specially prepared so that they may be activated by your presence. Such an action on your part is of great importance to your own development and also to the evolution of Terra as a unit.

At the moment the energy is lying in a state of potential. This potential can be realized only by cooperation from terrestrial man. Now this power may be activated in many ways. One sure way of activating this power is to take in your minds the “Twelve Blessings”, given by the Master Jesus. Practice every one of the Twelve Blessings on every one of these Cosmic Batteries and indeed you will be helping greatly your earth.

We have made available these sources of Energy so that they can be easily reached by all Spiritual aspirants. It is up to terrestrial

² From *Cosmic Voice*, No. 21, pp. 13-14.

people to use them. We have gone as far as the Karmic law permits. Terrestrial man must now go as far as his Spiritual conscience will take him.

You have been given this practice. Perform it and you will be the means of doing a greater good than you can visualize. The choice, dear friends, is yours to make. Will you start now consciously going back to God, or will you remain stagnant?

Go ye forward bravely into your future and by so doing you can make tomorrow dawn upon a shining planet free from ignorance, disease, war, fear and starvation.

Dear friends, you who have been introduced to the flying saucer truth through this article, do not minimize it, but investigate it further. And when you climb over the massive bulk of Mt. Adams and other holy mountains, pause frequently to pray for peace and enlightenment in our world. For though you may believe it not, you tread on holy ground, and your prayers will benefit many—and if enough of them are said, the golden millennium will be ushered in, peacefully, in all its glory.

EDNA S. SPENCER

SKIING

New England Ski Developments. A whole new area and one destined to become a favorite with all types of skiers has taken shape this past summer on the northeast face of Vermont's Stratton Mountain. Stratton (3936 ft.) with its network of twelve new trails, all designed by Sel Hannah, will be served by three Heron double chairlifts as soon as the snow flies. Two of these are set up tandem fashion to the summit, providing an 8000-foot liftline with a 1715-foot vertical drop to the floor of the West River Valley. The existing three upper trails have been laid out with the advanced skier in mind, while the lower half of the mountain is studded with runs and slopes appealing to both novice and intermediate. The third lift, located at the base, rises 315 feet and gives access to separate terrain suited for the beginner.

A three-story base lodge featuring an outdoor balcony at each level has been erected and President Frank Snyder envisions an Austrian or Swiss-type village surrounding the area in the next few years. Already in the works is a development plan which will add over twenty trails and two more lifts by 1963.

Mt. Snow, which lays claim to the title of the world's largest ski area by virtue of its uphill capacity, increased that figure to 12,000 skiers per hour with the addition of a mile-long Savio double chairlift from the base lodge to the upper reaches of the Overbrook Trail. Two completely new slopes have been hewn out of the northeast face, increasing the variety open to the advanced skier.

Farther north and to the east of the Long Trail, Magic Mountain has recovered from a \$50,000 fire at its base lodge last season and built a new slope called the "Big Schuss", to be linked to the T-bar. Though delivery of the new chairlift was promised for the autumn, Manager Hans Thorner has decided to wait until next June for actual erection to avoid the agonies of a wintertime installation. His hopes of an

Alpine village at the foot of the mountain are fast becoming a reality. Eight chalets have been completed, along with a new twenty-unit motel and base lodge labeled "Dostal's".

Killington Basin has taken advantage of snowcover which permitted continuous operation until May 8 last winter and constructed the "Snowshed" double chairlift, 3500 feet long, serving trails for novice and intermediate skiers. Also included in the summer's development were a new parking area and another novice Pomalift providing added capacity for beginners using the slope in front of the base lodge.

Mad River Glen continued the apparent swing of 1961 to sit-down conveyances with a new double chairlift, 4400 feet in length, rising 1400 feet, and rated at 400 skiers per hour. The new hoist will provide skiing on four new trails ranging from novice to expert.

Jay Peak has concentrated almost exclusively on trail work and cut a new expert run, lengthened an intermediate one, and built a new novice bypass.

On the Eastern Slopes, Cranmore has added a much-needed link from the lower North Conway Trail to the North Slope, eliminating the tedious cross-country walk back to the base. Likewise, the Artist Falls Trail has been connected with the Frank Koessler Run about midway down the mountain. Black Mountain has installed lights for night skiing on the Whitney slope. The relocation of a mile-long section of Route 16 through Pinkham Notch has made Wildcat's parking lot an integral part of the complete layout. High on the mountain, the Cata-pult has been graded from the summit, linked with the Alleycat via a new glade, and now provides a third through-run from the ridge to the base area.

Cannon Mountain has completely altered the Vista Way Trail, finished a two-year project in the Rock Garden on the Middle Cannon, widened the Tramway throughout its entire length, and eliminated the islands on the initial pitch of the Lower Cannon. On the other side of the Taft Trail, Mittersill has tripled its snow-making capacity.

Finally, from the Pine Tree State comes word that Saddleback has constructed five new novice-advanced trails, to be served by the area's two T-bars. Sunday River Skiway has put up a new 2200-foot T-bar running up to the snowfields from the top of the existing lift. This will open a 3000-foot intermediate trail leading to the top of the present Cascades Trail and will give the Sunday Punch a total length of 7200 feet. A new $2\frac{1}{4}$ -mile novice run has also been constructed from the summit of the mountain to the lodge at the foot.

EDWARD D. HURLEY, JR.

Mt. Washington Ski Patrol Accident Report. The Ravine was opened to skiing on March 25, 1961. Nine accidents were reported: three lower leg fractures (one each on the Little Headwall, Hillman Highway, and the Headwall); three fractured ankles (one on the Little Headwall, two on the Headwall); one head injury (on the Headwall: the skier was hit with his own ski as he fell and slid through the chute); one pulled leg muscle (on the Headwall).

Again I should like to recommend that a set time of day be posted to keep the skiers off the high elevations.

Number of days, on weekends, put in by the Patrol: Rusty Brown, 2; Kibbie Glover, 9; Jim Blauvelt, 11; Nelson Gildersleeve, 17; Rex Morey, 17; Henry Paris, 18.

This past season the Ski Patrol purchased ten new leg splints, four new telephones, one new Hailer (bullhorn).

Once again the Ski Patrol would like to thank the Forest Service and the A.M.C. for their fine cooperation.

SWAMPY PARIS, *Chief Patrolman*

CANOEING

A.M.C. Trip down the Allagash River, August 12-19, 1961. The Allagash River trip has been reported and discussed in APPALACHIA (December 1959) before this, and for any canoeist not much need be added by telling about last summer's trip. However, the August A.M.C. Allagash trip uncovered a few important points which, if put into print, might help other parties. Our group, in five canoes, consisted of Eric Smith, leader, Tim Greene, Linda Sprague, Bill Biddle, Tim Saunders, Guido Perera, Jeannette Davis, Jim Hallett, Nancy Despres and Anita Troja. All had had some experience in a canoe but not one of us had ever been down the Allagash. This increased the problems a bit, but we proved that an August trip in low water can be handled without a guide. Furthermore, there are fewer bugs in August, which makes a trip at that time far more enjoyable.

The first and most important point to remember about running the Allagash for the first time is to rely on advice only from those who have recently taken the trip. The amount of hearsay advice about low water and difficult going which we heard in Ashland on the way in almost stopped us before we had even seen the river. As it turned out, although the water was low, the run was not impossible, and even though some might have considered it a long walk with wet feet, it was a canoe trip.

Second, the trip from Umsaskis Lake to the village of Allagash is an easy five days, with time left for fishing and loafing. (The Allagash trip can be taken all the way from Moosehead Lake, but this requires about three weeks for real enjoyment.) The trick is to get into Umsaskis Lake by the International Paper Company road, which is locked at a gate; then fly back to Umsaskis at the end of the trip.

Third, in low water white-water rapids are nonexistent and therefore need no guide or experienced white-water canoeist. I am certain that in June and high water the Allagash would be a more exciting run, but in August it is pretty tame.

Our first night was spent at Round Pond, a beautiful lake a day's paddle from Umsaskis. Three or four good campsites are available and some good fishing, although we caught nothing worth eating at any time on the whole trip. (Jim Hallett fished as often as he could, too.)

The second night, our only rainy night, was passed at an unimproved site on the river bank. Wood was plentiful here, as at all spots, which was surprising in view of the large number of camps which go down the river. The next night was a cold one at Allagash Falls, perhaps the most interesting spot on the river. Here we shivered in a 38-degree

morning temperature, but the day was very comfortable. We camped the fourth night beside the river a short paddle above Allagash village, at a typical developed campsite. Here we heard the lumber trucks across the river and coughed in their dust. On the fifth day we reached Allagash, sent the drivers back by plane for the cars, and camped by the river.

We noticed more and more evidence of encroaching civilization over the entire area. The only answer to this may be the National Park which is at present under consideration. A committee is surveying the entire area and by 1963 will report its findings. Continued lumbering, or the dam at Rankin Rapids, would destroy much which the wilderness traveler has found of great value.

WILLIAM W. BIDDLE

Canoeable Rivers of New England. A canoeist's guide to New England rivers will be made available in early 1962. This guide is essentially a new edition of Phillips' and Cabot's *Quick Water and Smooth*, which has been out of print and in great demand for many years. The scope is expanded to include northern as well as southern New England; and the style has been condensed considerably in order to maintain a reasonable size, since twice the number of rivers are covered.

The most valuable source of data has been Phillips' and Cabot's book, although construction and erosion have necessitated re-scouting most of the rivers they covered. Many canoeists in the various A.M.C. groups have contributed information. Unfortunately, the Club trips are run on the same few rivers each year, so that it has been necessary to conduct some sixty scouting trips over a six-year period to explore the lesser-known rivers.

Having arbitrarily decided which streams are large enough to be considered practical canoe routes, we found the number of canoeable rivers and streams in New England to be about 350. Of these, about 50 will be omitted for lack of information, and another 50 as being of no interest. Another 100 are of little interest to canoeists, and will have only the briefest description. The remaining 150 rivers are covered in some detail. In round numbers, Maine has about 55, New Hampshire 35, Vermont 25, Massachusetts 20, Connecticut 14, and Rhode Island 1.

Most of the good canoe rivers in southern New England have long ago been ruined by dams, urbanization, pollution, and other consequences of acute overpopulation. Most of the few remaining will eventually be spoiled by flood-control dams. There are presently in New England 16 such dams completed, 9 under construction, and 25 authorized—a total of 50. (Conn. 14, N. H. 13, Vt. 12, Mass. 11, Me. and R. I. none.) An indefinitely large number will be authorized in years to come, as their necessity is brought about by ever-increasing construction, drainage projects, deforestation, and other causes. The sites most suitable for their construction are nearly always the best canoeing sections. Already thus affected by such dams are the Westfield North Branch, formerly the best white-water run in Massachusetts, and the West River, formerly the best in Vermont. Some of our better rivers which will eventually be thus spoiled are, to name a few, the

Farmington in Connecticut, the Westfield Middle Branch in Massachusetts, and the White, Saxtons, and Williams Rivers in Vermont.

The more northern rivers are, of course, in a somewhat better state of preservation. Even so, many of the smaller rivers suffer from deforestation; and nearly all our major rivers are dammed for power. This is especially so in Vermont. The best canoe waters are in Maine and northern New Hampshire. Much satisfaction has been derived from exploring new rivers which have not previously been recognized as good trips. To name a few of the attractive but little known one-or-two-day white-water runs:

The Dead River is the most outstanding white-water trip in New England, continuous hard rapids and forest setting, canoeable all summer. The Rapid River is another beautiful river, short but very steep, more suited for foldboats or decked canoes. The Pemigewasset East Branch is probably the most difficult water we have explored, discounting the upper Kennebec which is too heavy and dangerous to be considered as a practical run in any craft.

The Sandy, South Branch of the Dead, and Carrabassett Rivers are attractive one-day runs of intermediate difficulty. Farther north in Maine, the best quick-water rivers are the Machias, Musquacook, Seboeis, and Penobscot East Branch. There are only two so-called "wilderness" trips of more than a few days' length—those of the St. John and Allagash river systems. Both are pleasant quick-water trips in northernmost Maine.

Smooth-water canoeists may complain, and justly so, that this guide is rather oriented toward white-water rivers. A sincere effort has been made, however, to include the better smooth-water trips, what few there are. A few of the seemingly unattractive slow rivers close to Boston remain popular canoe outings, particularly the Charles, Sudbury and Ipswich Rivers. Canoeists who would like to explore more interesting rivers, having good current but few rapids, would do well to try the lower Souhegan, Blackwater, Crooked, Soucook, or Little Ossipee Rivers. Such rivers as these make especially good trips in the spring, when the current is strong and the banks abound with birds and other wildlife.

A request constantly received by the Club throughout the summer is for recommendation of a good smooth-water river within driving distance for a weekend camping trip, or for an extended wilderness trip on an "easy" river. Unfortunately, neither exists in New England. One must accept a compromise selection. The upper Connecticut and Saco Rivers and Rangeley Lakes chain are popular summer trips, though not wilderness. The upper Moose River and Penobscot headwaters are recommended smooth-water camping trips. The Allagash is perhaps the most famous and popular of all canoe trips. It is not so difficult a trip as one might suppose, and is done by hundreds of inexperienced canoeists annually, tending to become rather over-saturated with them in July. Unfortunately, none of these summer trips listed contains an unavoidable portage, hence they are infested by countless "sportsmen" in motorboats, who leave in their wake broken beer bottles and litter of all sorts. This is less of a problem on the white-water rivers.

In re-scouting Cabot's rivers, it has been interesting to note the changes which have occurred in only twenty-five years. Most apparent

has been the disappearance of many small milldams, and the appearance of fewer but larger hydroelectric and flood-control dams. Another disconcerting fact is that some of the smaller streams are shrinking, and can no longer be canoed. Deforestation may be the primary cause. Such streams flood badly during freshet and become jammed with debris. In the summer they practically disappear, and become overgrown with brush.

The situation regarding use of private lands by canoeists is becoming a problem. "No trespassing" signs are becoming increasingly evident. The population spread and the shrinkage of woodlands have eliminated many of Cabot's recommended campsites. We are not recommending any private campsites outside Maine, except where special arrangements with the landowner exist. State laws tend to discourage non-taxable activities such as canoeing and camping. The State of Maine is an exception. They not only encourage canoeing and publish a useful canoeing guide, but also have a most satisfactory arrangement for use of privately-owned woodlands by campers. On the other hand, in some states the situation has so deteriorated that canoeing groups are resorting to lawsuit in attempting to establish navigability rights. It would appear, however, that such action might tend to have the opposite effect of further decreasing the already scant public acceptance of the sport of canoeing, particularly white-water canoeing, by arousing undue antagonism. It is encouraging, on the other hand, to note the public enthusiasm and friendly relations which have been created by canoeing groups in places such as New Boston, N. H., and Jamaica, Vt. Perhaps the canoeing opportunities available in New England will someday be more fully appreciated by a greater number of persons, and thereby preserved for future generations. That is the primary purpose of this guide.

STEWART T. COFFIN

ACCIDENTS AND RESCUES

Watch Your Step in Those A.M.C. Huts! While at the Galehead Hut on July 10, 1961, with the annual A.M.C. Range Walk group of thirty-two people under the leadership of Ted Brayton, and including a *Life* reporter, photographer, and Huts Manager George Hamilton, Ranger Kenneth Sutherland of the Pemigewasset District, W.M.N.F., suffered an unusual accident.

Sutherland had gone into the bunkroom during the supper hour to get a package of cigarettes and, while descending from his third tier bunk, slipped and fell to the floor, injuring his right ankle. Cold water packs were applied during the evening and a borrowed ace bandage was put on. Since no severe pain resulted and the swelling was nominal, it was jointly decided by Hamilton, Brayton and the patient to await morning before taking further action.

After the customary outstanding breakfast served by Hutmaster Bob Krietler and his assistant Arnold Cary—which was enjoyed by all, including the injured member of the party—and when it was apparent that Sutherland would be unable to continue with the group, George Hamilton left by the Galehead Trail to notify Ranger Charles Hutchin-

son of the Ammonoosuc District and to start evacuation procedures. The Range Walk group continued as scheduled to Zealand Falls Hut. Hamilton and Hutchinson, with the assistance of Ranger Goodrich of the Androscoggin District and Acting Ranger Footer of the Pemigewasset District, immediately organized a 19-man evacuation team.

Back at the hut, with the patient made comfortable under the able assistance and efforts of Hutmen Krietler and Cary—by hot-water soaking of the injured ankle, allowing him to assist in wiping breakfast dishes and help in the ever-present worrying about how many guests there would be for the evening meal, and by the bountiful supply of old magazines—the time passed quickly until the arrival of eleven Forest Service and Appalachian Mountain Club litter-bearers just as the evening meal was being served, followed by that of the returning Hamilton and of Dr. Harry McDade of Littleton, who is becoming quite prominent in such missions.

The injury was diagnosed as a fracture, the leg was splinted, and the patient medicated and put to bed.

After an early breakfast the next morning the party left the hut at 8.00 a.m. via the steep Galehead Trail. Six bearers at a time were used on the Stokes litter and the crew was rotated every five minutes. At the landslide the party was joined by four State of New Hampshire Conservation Officers, with District Chief Paul Doherty, as welcome additional bearers. Farther down, Ammonoosuc District Assistant Louis De-Rosia had cleared a welcome short-cut trail to the end of a timber-sale road, which shortened the packing distance to a vehicle about a mile. The party arrived at the vehicle at 12 noon. Sutherland was taken to the Littleton Hospital where X-rays showed three simple fractures of the lower leg bones in the ankle region—one fibula and two tibia.

The entire evacuation was not without irony and humor, to say the least, since both the evacuee and evacuors have often worked together in administering to the similar emergency needs of others, and the operation was a true, if undesirable, reunion.

KENNETH I. SUTHERLAND, *District Ranger*

P.S. Leg has come along fine. Maybe you think I didn't catch all kinds of . . . , advice, comments, etc., from the likes of Goodrich, Hastings, McDade (although he was very kind). Throughout, the laughter of those with whom I talked, even as they expressed their sorrow at my misfortune, was enjoyed and will be long remembered.

Don't be a litterbug!

Poor Leadership. As a camp leader I should like to express my concern for the many camp groups who are climbing in the White Mountains with grossly inadequate leadership. A case in point was a camp group we observed this summer in the Great Gulf, while conducting a session on mountain leadership for our own camp counselors.

There were approximately thirty boys and girls and only one obvious leader. When we passed the group on the Adams Slide Trail the line was spread out over at least a mile. The campers in the lead traveled very rapidly, leaving the leader and slower campers far behind. The leader was correct in staying at the rear, but he had no control over, or communication with, the front of the line.

When the first campers reached the rocks above treeline they started to fan out, each making his way toward the top with no regard for the trail. As a heavy fog was rapidly setting in our party advised the campers to come back to the cairns.

The camp group had apparently agreed to turn back at a certain time if they had not reached the summit of Adams. However, when the campers in the middle of the line shouted that it was time to start down, the lead campers kept right on toward the summit. The others called again, but three boys refused to turn back. They were about an hour below their goal, and the fog now made it impossible for the boys to see the rest of the campers. The men in our party intervened at this point and persuaded the boys to go down with their group.

Later that afternoon we were walking down the Great Gulf trail when we came to four tired and frightened girls sitting by the path. They were lost campers from the same group we had seen on Adams. The campers had been so far apart that the girls were not missed when they had wandered off the path. We took the four with us to the Glen House and returned them to their worried leader. If the girls' judgment had not surpassed their leader's, the day might not have ended so happily.

Perhaps I should feel grateful to this camp group for the outstanding illustration of addle-brained mountain leadership which they provided for our counselors. However, I should prefer that their learning experiences not be at the expense of the safety of thirty young lives.

CAROLYN CARPENTER

Needless Searches. In the Great Gulf last June an unruly child (12 years old) ran away from his party; the resulting search cost the taxpayers \$2300 and seriously inconvenienced many busy men with far more important jobs to do than this one. On Friday, June 23, a church group took some boys to camp at the Great Gulf Shelter. The following morning the weather was cloudy with some slight precipitation as the party started up the Buttress Trail, planning to cross over to Crag Camp to spend the second night. (Incidentally, this was far too large a group, some 30 in all, to spend the night at Crag, which is a small building.) Fairly early in the climb the leaders decided, since the weather was uncertain, that while the older boys would follow the original plan the younger ones would return to the Great Gulf Shelter. There were plenty of adult leaders (although, as it turned out, not sufficiently effective ones) for the two groups.

Perhaps miffed by this decision, for he was in the younger group, our hero ran off and followed the trail down to Dolly Copp Campground. There he was found, sitting beside the road, crying, by a warm-hearted family who took him into their camp. He told them several different untrue tales, but the final one seemed to be that he had suffered some dizziness while climbing and had therefore left the group, with their knowledge, and that they had agreed to pick him up at Dolly Copp on Monday night. Later the Dolly Copp Campground was searched, and leaders from the boy's party and others went around calling him by name, passing well within hearing distance of the camp where he was, but he did not see fit to answer. The people who were sheltering this boy knew that there was a boy lost, but they did not report his presence

with them since they rather naively supposed that since he had said he was to be picked up on Monday, he could not be "lost".

By afternoon a substantial search was underway by Forest Service men, conservation officers from the N.H. Fish and Game Department and A.M.C. personnel (who so often and so successfully join together on jobs like this) of the trails between the Great Gulf Shelter and the Glen House and Dolly Copp. When at 9 p.m. no trace of the boy had been found, the search was called off until morning.

Sunday morning about 4.30 a.m. a much augmented force of searchers began gathering at the Glen House. The A.M.C. Pinkham Notch crew had turned out of bed early to prepare, and deliver to the Glen House before 5 a.m., 100 trail lunches. A bit later 70 Marines who had been bivouacking in Tuckerman Ravine joined the search and still later, an Air National Guard helicopter and a National Guard field kitchen. The Peabody River was searched for the miles between Camp Dodge and the Great Gulf Shelter, all the trails that the boy could have reached and the area to the sides of them, gone over carefully. Two of the Marines were slightly injured.

By midafternoon most of these jobs had been pretty well covered, and plans laid for continuing the search throughout the night and, if necessary, on Monday. For Monday's search 160 men had been lined up.

Shortly before 4 p.m. District Assistant (Saco District) Archibald drove his truck through Dolly Copp Camp. Happening to see the boy standing beside the road, he called out, "What's your name, Sonny?" Off guard for an instant (for he had not given his name to the people who had befriended him) the boy gave his correct name. But when Archibald told him to jump in the truck, he replied, "No, I won't", and ran off at his best speed. One of the most pleasing items in this story is the fact that Archibald can run too. (Would that one of the counselors present when the boy left the group had also been a runner!)

We happened to come down to Pinkham in the early evening when the search parties were coming in, tired, hot, hungry and a little miffed now on their own part. I observed to a group of them that as a payer of taxes to the State of New Hampshire and to the Federal Government I should like to see the people responsible for this boy foot the bill for the search.

"And shoot the damn kid", one of the searchers added with some vehemence.

But unfortunately, instead of being shot, damn kids who do this sort of thing get their pictures on the front pages of the newspapers, along with sob stories of "how brave they were", while the men who had put forth great efforts in the search and run a certain amount of danger of injury to themselves, drop out of sight. It is a curious reversal of values.

There are altogether too many needless searches. And too many incompetent people taking groups, particularly of children, into the mountains. The organized commercial boys' and girls' camps of this region, for the most part members of the New England branch of the American Camping Association, are every year becoming more aware of the necessity for proper leadership and are taking steps to insure it. They often invite the Supervisor of the White Mountain

National Forest and various men from the A.M.C. to their spring meeting in Boston for discussion on how best to achieve this. Moreover, they already have on their staffs some 40-50 certified leaders who have attended Bradford Swan's spring workshop on leadership for camp counselors (held at Pinkham Notch Camp and on the Presidential Range, with instructors from the Forest Service, the Fish and Game Department, the A.M.C., etc. There is a charge made to the students to cover their expenses; the instructors are unpaid). Very little trouble comes nowadays from the commercial boys' and girls' camps.

But the church, scout and other benevolent organizations are now the great worry. Not only do they constantly require many laborious and expensive searches but their parties are the ones which leave dirty camps, peel the birch trees, deface property. Their groups are in general manned by unpaid, inexperienced leaders, they often have far too few leaders for the number of children to be cared for, and the leaders often seem quite casual—almost indifferent. There may well be a point here that more of the competent and experienced climbers should occasionally take time to accompany children from these organizations. For while it is usually considered a splendid thing for any children, including the so-called "underprivileged" ones, to get out into the woods and mountains, I doubt if it does them so much good if they learn nothing of safety, good camping, cleanliness or consideration for others. Carolyn Carpenter's note (above) concerns a Red-Feather organization. This group had camped, not in the area planned for the purpose, but off in the woods, with their two big fires built directly on the forest duff (with no fire permit). Their leader not only exercised inadequate control over his charges but permitted them to leave a disgusting campsite with cans, papers, garbage, etc., strewn around. I felt strongly that the polite and friendly children—I chatted with them—deserved far better leadership than this.

During one week this last October, one single district of the White Mountain National Forest was faced with three searches for people who had unnecessarily run into trouble in the mountains (at this time of year, of course, none of them from any of the commercial boys' and girls' camps). In one case 6 boys, 9-13, and one leader, 21, started at 2 p.m. to climb Kearsarge North, not having any idea how long it would take. While the boys became bushwhacking around the ledges on the summit, one boy became separated, fell and got scratched and bruised. Just before daylight the next morning the party made their way out themselves, but not before about a dozen men had gone searching for them. The second case involved 9 boys and their leaders, who had planned to climb Chocorua. The boys, however, decided to take the trip a week earlier and without the leaders. At the summit one boy left the party, became lost and was not found until noon on the following day. Thirty to 35 people had been searching for him. The third case is that of a group of 27 young boys and girls with two counselors who started up Whiteface. An A.M.C. member who observed this expedition, while taking an active part in the resulting search, wrathfully reports that the counselors literally did not know where they were going, to say nothing of how long it would take and whether they had time to return before dark, or whether the climb was within the strength of their children. As it turned out, when they got back to the

base, they discovered that one girl of 12 years was missing. It was quite a bit later before they discovered that a 12-year-old boy was also missing. Thirty-five searchers went out. In the Chocorua Case the pastor of the church which had sent out the group wrote a warm thank-you letter to the Forest Service in appreciation for their search. This is most unusual and most welcome, for it is very rare that men who carry out these searches receive any thanks whatever. I remember one case recently when men who had actually risked their lives received not a word of thanks.

I do not mean to imply that all commercial boys' and girls' camps are perfect, and all the church, scout and charitable organizations are not, for I know at least one religious camp where the counselors are not only volunteers but most dedicated and, in addition, very competent and careful climbers and campers. And I know of one private school, fashionable and expensive, which has one of the worst reputations of any group which goes into the woods for casual, irresponsible leadership and general lack of consideration for others. Last summer one of these groups arrived at camp in the following order: the two counselors first, alone; then the various boys and girls strung along at various intervals. By dark two girls, who had taken a wrong turn, were still missing. If this organization prefers to run their trips in this fashion, it is their right to do so only as long as they do not, as they did in this case, involve other people in the resulting search.

Here are some figures. Representatives of the Forest Service frequently roam the woods and mountains, chatting with various groups of climbers and campers, observing, taking mental notes. They have no formal questionnaire but they are alert to notice such things as poor organization, poor discipline of the children, poor trail and camp behavior, poor planning, poor equipment, an inadequate number of counselors or inexperienced counselors. Some 4000 of these informal visits were made during the recent climbing season and the information which had been gathered was analyzed. Those groups considered poorly managed or led in one or, much more usually, several important respects are as follows:

- 43% of all church groups;
- 18% of all scout groups;
- 6% of all organized boys' and girls' camps;
- 2% of all other groups, mainly family groups.

One answer seems to be: take the kids yourself. For if Dad and Mum love the mountains and are experienced, there is no better way.

How to help the others? The first great difficulty is in reaching them, since they often belong to no organization (such as the American Camping Association) through which words of warning are spread (and most of them don't read APPALACHIA!). Another difficulty is that they do not want to spend money for training counselors. Nor have they many leaders with enough free time to take courses. Of some 89 men and women who have taken the A.M.C. training program, only 5 were sent by one of these groups, the Boy Scouts. Five more, it is true, A.M.C. members, came at their own expense, because they wanted to have the training for Scout work.

And finally, are all these groups really eager to improve? Why should they bother too much? Why should they take time or spend any money of their own when the Forest Service and the others will always come after them? Isn't it really rather pleasant and exciting to have a large turnout of men, planes, etc., for your benefit? And all free. It should do a lot for the ego of almost any child and not a few adults. (Some few would mind very much, of course.)

My own idea, speaking as one single individual, is that those who through their own fault have caused a search should be required to pay the cost. Or at least some of it. And my aim in this is not nearly so much to recover some of the large expenses, as to prevent the irresponsible behavior which leads to searches and which might well lead also to real injury to the children involved. There will be lots of searches as long as searches are free. Free things are for wasting.

MIRIAM UNDERHILL

HUTS AND TRAILS

AMC Hut System, Summer Season 1961. This past summer proved to be the busiest in the long history of the hut system. The Lakes-of-the-Clouds Hut was, as usual, the first hut opened and the last to close, the season running from June 4 to September 18. This hut in particular was busy from its opening through the entire summer, starting off with a crowd of 97 the first Saturday it was open, June 10. Every operation, with the exception of Lonesome Lake Hut, had a record season; this includes Pinkham Notch Camp as well.

Business throughout the White Mountains was good after the cloudy weather early in the summer. Business in the huts, however, was good from beginning to end; the poor early-season weather had little effect on walking. The story about the huts which appeared in the August issue of the *National Geographic Magazine* undoubtedly stimulated business in the huts for the period following August 15, at which time we usually get a let-up in business as the children's camps cease coming into the huts. Judging from the inquiries we've received as a result of the story, we may expect added business next summer. On the basis of this summer's business it will be necessary to bolster certain crews in the hut system, for this season the boys were taxed to capacity in keeping up with the crowds.

It is too bad that operating expenses continue to mount annually. This is the third summer there has been no rate change in the huts, while there has been no major rate change for over six years. Even with a substantial increase in gross business, our break-even point becomes harder to attain each year, due to inflation and the necessary increases in operating costs to meet the increased use-load throughout the hut system. This is a problem which faces all agencies concerned with outdoor recreation—increasing use of facilities often old and over-taxed requiring additional staffing to handle the public demands. The A.M.C. is facing this problem, along with other non-profit, state and federal organizations. It will require careful, long-range planning by all to meet the demands of the years just ahead.

GEORGE T. HAMILTON, *Huts Manager*

Connecticut Roving Trail Crew. The sixth annual White Mountain work party of the Connecticut Trail Crew was based at the Zealand Falls Hut. Led by Seymour Smith, the crew included Marie Carden, Lud Fehrenbach, Phyllis Webster, Bente Morche and Charlie Krug. They cleared the A-Z Trail from the Zealand Trail junction eastward to the brook ("Mutiny Brook") about half a mile down the Crawford slope; the Lend-a-Hand Trail from Zealand Falls Hut to the summit of Mt. Hale; and the Twinway from the Zealand Falls Hut to the junction with the trail leading to Zeacliff Pond and the abandoned Zeacliff Shelter. Approximately seven miles of trail, in all, were brushed standard.

Interesting flora observed included a sizable stand of the rather rare orchid *Arethusa bulbosa* (Dragon's Mouth, Bogrose orchid, Swamp pink) and two stands of *Drosera rotundifolia*. This last is one of the Sundew family—that is, it is carnivorous.

CHARLES S. KRUG

HISTORY

More on Antarctic Historic Huts. Like many others I thoroughly enjoyed reading Bradford F. Swan's interesting article in APPALACHIA (June 1961) on "The Historic Huts of the Antarctic". Near the end of his article Mr. Swan wrote that he would have liked to hunt for the stone hut that Griffith Taylor and the three other men of the Western Geological Party of Scott's last expedition built in Granite Harbor, Antarctica. Mr. Swan was under the impression, when he wrote the article, that no one had visited this hut since Taylor's party left it on January 14, 1912.

However, members of the Trans-Antarctic Expedition visited it in 1957 or 1958, and two parties connected with the Tufts College-National Science Foundation Antarctic Expedition (1959-1960) visited it in November 1959.

On November 18, 1959, I took a reconnaissance helicopter flight, with U.S. Navy personnel, from the U.S. Navy installations at Hut Point up to Granite Harbor. The Tufts expedition was going to man-haul on the sea ice later in the season; and the purpose of the flight was to lay food and fuel caches and to check on the cracks, surfaces and permanence of the sea ice. On this flight we located and visited the hut. The stone part of it was excellently preserved, although the seal-skin roof had fallen to the floor. Taylor's party used seal blubber for a cooking fuel, and rather than ruin their tent by cooking inside it they built the stone hut as a cook shack.

Near the hut were a sledge, a rusted ice-axe, leather straps for lashing equipment onto the sledge, fuel cans, toilet paper, and two books. Scott's men had abandoned this equipment when the ship which was to have picked them up never reached them and they had to retreat over-land more than 100 miles to the base station of the expedition at Cape Evans. One of the books was *The Secret of the Island* by Jules Verne; the other, *Tales of Mystery and Imagination* by Edgar Allan Poe. Although they had been out in the open for almost fifty years they were in reasonably good condition, for in this part of the world it never

rains and only occasionally snows. Can you imagine your excitement on digging in a Caribbean beach and finding a sealed bottle in which there was a note written by Columbus telling of the first landing on San Salvador? We all felt something like this when we found the stone hut, the ancient sledge, and the other equipment.

I took the two books from the sledge and brought them back with me when I returned to the States at the end of the field season. I did not consider this vandalism, because my purpose was to return them to their rightful owners, both of whom I knew. The National Science Foundation sent one of the books to Professor Griffith Taylor of Sydney, Australia, the leader of the Western Geological Party. The other was sent to Professor Frank Debenham of Cambridge, England, the geologist of the party and first director of the Scott Polar Institute. Both wrote, telling of their appreciation and thanking the National Science Foundation and me for returning the books which they had abandoned so long ago as young men and which were now returned to them when they were old.

Later in the field season Bob Goodspeed, Roger Hart and Bill Meserve¹ (undergraduates at that time at Tufts University), Bob Rutford (a graduate student in geology at the University of Minnesota), and I, after man-hauling 40 miles from Marble Point on the sea ice, reached the stone hut on November 23, 1959. We spent approximately one week studying the geology of the area. On one of the raised beaches near the hut we found a stake which proved that members of Fuchs' Trans-Antarctic Expedition had visited the area a year or two earlier.

ROBERT L. NICHOLS

Green Mountain Railway on Cadillac Mountain, Acadia Park, Re-explored.² On a day in November, 1960, so dull that my Kodacolor prints appeared like black and white photographs, I walked up the now obscure cog railway right-of-way, an easy trip for one trying out his legs after a surgical bout in the Massachusetts General Hospital. My wife parked the car in the turnout on the Jordan Pond Road 0.8 of a mile south of its junction with the mountain road, which appears on the Bar Harbor quadrangle, U.S.G.S. (1956).

The old right-of-way which comes up from Eagle Lake crosses the road at this point, so I entered the scrub and soon found an iron rod, one inch in diameter, driven into the granite and protruding about a foot. These rods were used to hold the ties. By careful and continuous search one can, at least in the fall when the leaves are off the trees, proceed on this old roadbed nearly to the summit, where it disappears near the road. Its apparent terminus may have been near the old hotel, because in back of the present Government gift shop, near the summit, there are two rods like those on the right-of-way.

The location of this cog railway, built in 1883, is on a ridge south of a prominent brook which crosses the Jordan Pond Road a few steps

¹ Roger Hart, Bill Meserve and I are Club members. Roger was a hutman at Greenleaf in 1957 and 1958, and Bill was a hutman at Madison in 1958.

² See APPALACHIA XXIV (December, 1943), 435-40.

north of the turnout area where we parked the car. It proceeds in general southeasterly to the summit, the lower part in fairly heavy growth. In about half a mile it comes out on ledges which give fine views to the north and west. At this point you can see the first sharp S-turn on the auto road. A little farther on it crosses the auto road, somewhat north of the second S-turn; here it is obscure, but it can be picked up by the iron stakes on the upper side of the road. The last part of the right-of-way is not apparent, so there is a short bushwhack to the auto road near the summit parking area. My wife, on instructions to drive to the summit if I did not return to the car in one and a half hours, reached there just about as I did.

We returned and examined the roadbed, which she had discovered, from the turnout area to the lake. This is a very gradual climb, a most interesting way to ascend the mountain, and would give rewarding views on a good day, especially in the morning.

JOHN P. VOSE

CONSERVATION

Cape Cod. On August 7, 1961, the President signed the bill for a Cape Cod National Seashore (Public Law 87-126). First brought up in Congress in 1957, the idea of a national park on the Cape was studied and worked over in numerous bills and amendments in both Houses of Congress. While most national parks have been carved out of the public domain or established in wilderness regions, the terrain here involved was entirely within long settled and stable towns; therefore many problems not usual in creating a park had to be recognized and solved. Several unusual features in the act are due to the special circumstances of the region, compromises between the valid desires of the towns and the aims of the Park Service and other conservationists. As finally authorized, the Seashore will include some 26,670 acres in the towns of Provincetown, Truro, Wellfleet, Eastham, Orleans and Chatham, substantially as shown on the map on page 428 of the June 1959 APPALACHIA; Morris Island in Chatham and some tracts in Truro and Wellfleet are excluded, but attempts to omit Jeremy Point and Great Pond in Wellfleet were defeated.

The limitations of the Secretary of the Interior's authority to acquire lands by condemnation (that bugaboo, eminent domain!) have done much to make the act acceptable locally. Any property owned by the Commonwealth of Massachusetts, a town or political subdivision can be taken for the Seashore only with the consent of the owner. Improved property, defined as "a detached one-family dwelling, the construction of which was begun before September 1, 1959" with "reasonably necessary" surrounding land of at least three acres, may be used and occupied by the owner for twenty-five years or, if he owned it on September 1, 1959, for life; this right runs with the land and may be transferred. A novel provision completely suspends the Secretary's right to condemn improved property in any town which has an applicable valid zoning by-law which has been approved by the Secretary.

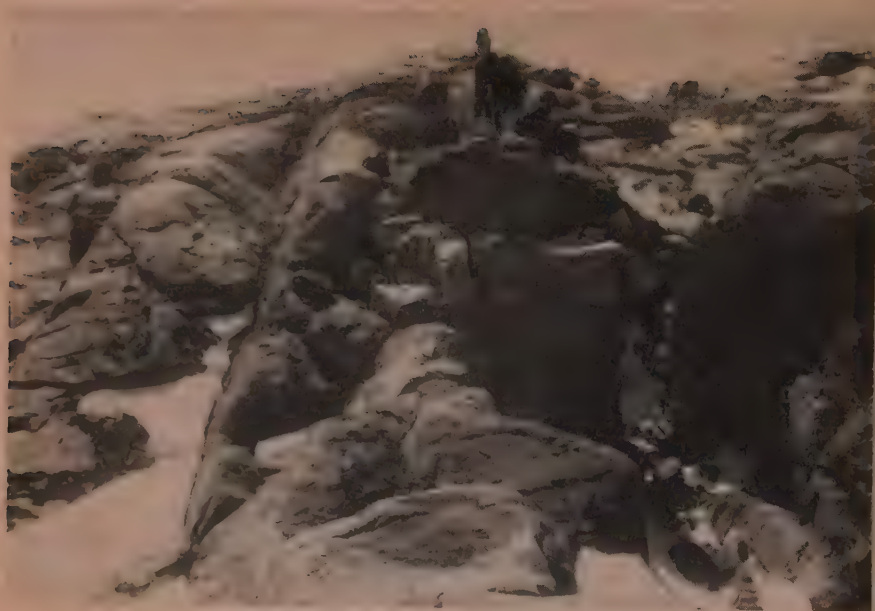
To further conciliate Cape opinion, hunting and fishing may be allowed and the regulation of shellfishing is left to the towns. Further-



GREEN MOUNTAIN RAILWAY, CADILLAC MOUNTAIN, MAINE

Photos courtesy of Anchor Light Studio, W. H. Ballard, Southwest Harbor, Maine





more, an Advisory Commission of ten members—one from each of the six towns, one representing the Barnstable County Commissioners, two the Governor, one designated by the Secretary—will voice expression of regional ideas and is expected to have much influence.

To those who fear over-development it is reassuring to see protection spelled out. "In order that the Seashore shall be permanently preserved in its present state, no development or plan for the convenience of visitors shall be undertaken therein which would be incompatible with the preservation of the unique flora and fauna or the physiographic conditions now prevailing or with the preservation of such historic sites and structures as the Secretary may designate."

The Seashore shall be established by the Secretary when he is of the opinion that he has acquired enough acreage to be "efficiently administrable". The Act authorizes appropriations up to sixteen millions; acting promptly, the House appropriation sub-committee on September 10 approved two million to start land acquisition. Since Massachusetts is planning to turn over its park holdings to the Federal government, we may look for an early establishment.

MARJORIE HURD, *Chairman, Conservation Committee*

In the New York area the principal topic of conservation interest is the study bill now before the people of the State. Hearings have already begun and will continue until January 1962, and after amendments have been made, the bill will be introduced for action in the 1962 legislative session. John Coggeshall and Ruth Hardy represented our chapter at the Kingston hearings on September 16, and other members will appear at New York hearings on January 11, 1962. The purpose of the bill is to amend the present conservation law, broadening the usage of the State Forest Preserve to provide for more public outdoor recreation areas such as campsites, boat launching sites, ski slopes, etc.; the ultimate effect will be to decrease the acreage to be kept in a "forever wild" state. The bill also aims to define more clearly the areas that should be kept forever wild and to give those areas more complete protection. The bill has two types of opponents; (1) those who believe it will cause the ruin of our prime wilderness areas, and who advocate more, not fewer, forever-wild tracts; (2) those who believe that the bill caters to one-half of one percent of the population, and does not give enough consideration to the recreation needs of the great majority of our people (the very people whom the first group contends are careless, thoughtless, and unappreciative of the non-replaceable benefits of the wilderness areas).

Opposite, above: SCOTT EXPEDITION STONE HUT IN GRANITE HARBOR, ANTARCTICA (see p. 558). *Photo by Robert L. Nichols.*

Opposite, below: EMILY KLUG'S CAVE. One of her shelters just east of the Crawford Path, on the cone of Mount Washington (see APPALACHIA, June 1961, p. 422). *Photo by Bradford F. Swan.*

The New York Chapter Conservation Committee is still in process of drafting a recommendation which it hopes the Chapter Committee can adopt as Chapter policy.

ESTHER STREIFUS, *Chairman,*
Conservation Committee, New York Chapter

Proposed Allagash National Recreation Area. Maine's Allagash River flows northward for nearly 100 miles, linking seven major lakes bounded by unbroken forest. This waterway of calms and rapids has long been a classic wilderness canoe route.

The National Park Service proposes that 50,000 acres of water surface, consisting of 63 lakes and 360 miles of river and tributary streams, and 246,500 acres of forest land be set aside as the Allagash National Recreation Area for wilderness recreation.

With careful planning, access to the proposed . . . area can be adequate, yet placed and designed so as not to impair the natural environment of the region. At access points so planned, perhaps on several of the larger lakes, camping areas can be provided, as well as information centers and places for visitors to secure canoes and supplies in order to spend a day, a week, or all summer exploring lakes and streams in the watershed. Secluded lakeshore campsites can be adequately maintained, and a system of trails developed between lakes, to hilltop viewpoints, old abandoned lumber camps, mountain-side caves and the feeding grounds of big game.

In addition to canoeing, camping and walking, for which the Allagash country is ideally suited, visitors to the proposed recreation area could, in season, enjoy fishing for the native brook trout and togue, and hunting for deer, bear and wildfowl. The area offers excellent opportunities for scientific study of many aspects of natural history, including wilderness ecology, the great importance of which in biological research is becoming increasingly apparent. Interpretation by park naturalists of the area's biology, geology and history would greatly enrich the outdoor experience of visitors to the back country preserve.

The proposed dam at Rankin Rapids, originally conceived as a supplement to the proposed Passamaquoddy Tidal Power Project, would flood about 98 percent of the main course of the Allagash. "But even if saved from flooding, the wilderness characteristics of this area cannot long survive if the growing network of roads needed for modern logging operations opens it indiscriminately to increasing motor travel."

The proposed Allagash National Recreation Area would comprise less than 1.5 percent of Maine's forest acreage. The National Park Service believes that such a recreation area would be a valuable economic asset to Maine and in addition, "can provide the more important but immeasurable benefits of health, happiness, inspiration and a deepened love of country".

RUTH WESTIN, *Chairman,*
Conservation Committee, Portland Chapter

NATIONAL AND STATE PARKS

The National Park Service summarizes the reports of mountain climbing in the more important national parks and monuments for the year 1960 as follows:

Devil's Tower National Monument: 102 climbers in 41 parties (a slight decrease in number of climbers and increase in number of parties over 1959).

Glacier National Park: a marked decrease in the number of climbers, with only 115 recorded ascents.

Grand Canyon: 26 persons in 6 parties. The number of known climbers appears to be steadily increasing.

Grand Teton: An increase of 149 climbers over 1959, and of 54 over the previous high in 1955. The total number of climbers attaining summits was 1,911, an increase of 263 over 1959. There were four ascents of the North Face of the Grand Teton and one of the complete West Face. For the Park as a whole 23 new routes and first ascents were recorded, which includes two previously unclimbed peaks S.W. of Prospectors Mountain.

Mt. McKinley: Five successful ascents were made.

Mt. Rainier: 422 climbers, out of a total of 712 starting, were successful in reaching the summit (a decrease of 77 compared with 499 out of 765 reported in 1959). Twelve different routes were tried, two without success. Of 203 professionally guided trips on the Ingraham and Gibraltar routes, only 135 were successful.

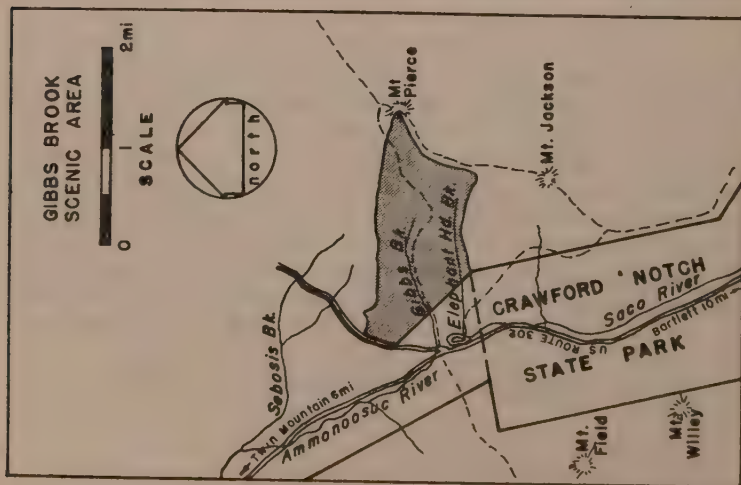
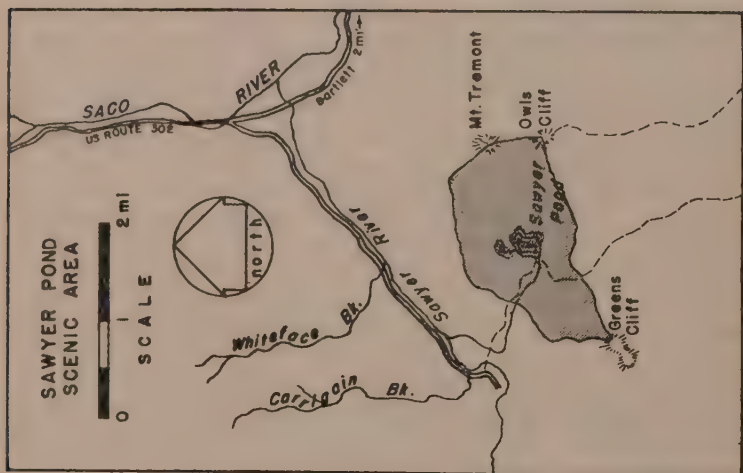
Olympic: There was a decline in climbing activities, owing to the construction of the Hoh River Road. Mt. Olympus was attempted by 149 persons, of whom 139 were successful.

Rocky Mountain: There were 1,691 climbs of Longs Peak, including 168 successful ascents of routes on the East Face. The sheer 1200-foot section of the face known as the Diamond was climbed for the first time.

Yosemite: A steady upward trend in climbing activity was noted, with 1,543 persons making 564 registered climbs, as compared with 1,340 and 519 climbs in 1959. Second successful ascents were made of the faces of Half Dome (six days) and El Capitan (seven days).

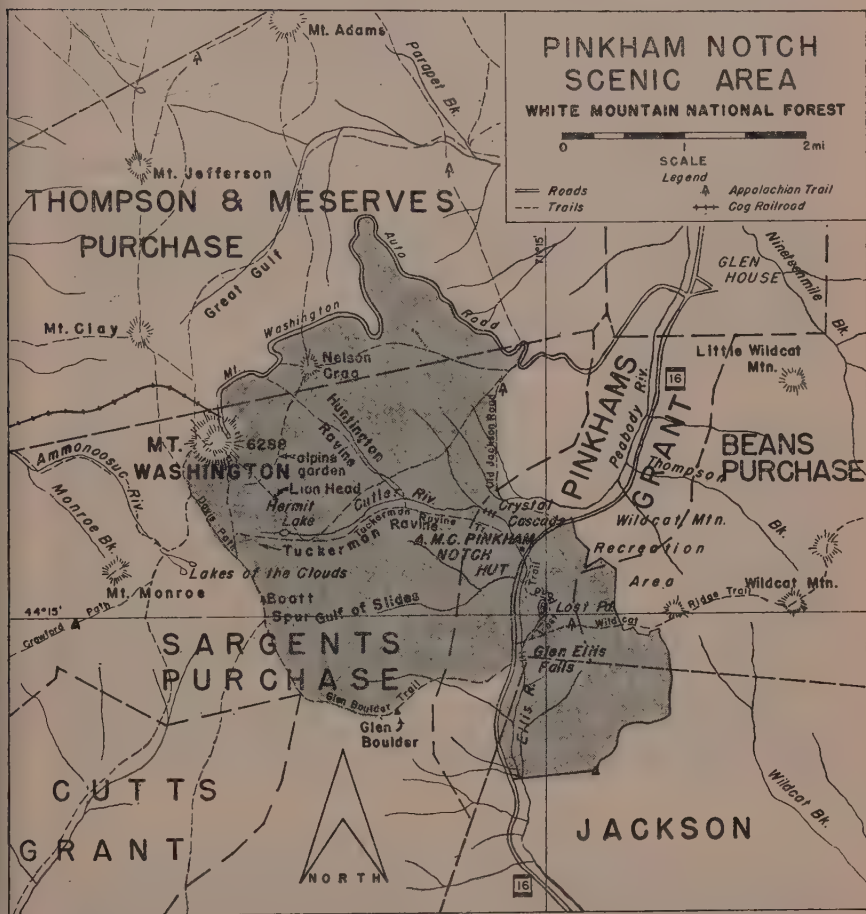
State Parks. A survey of the state parks made by the National Park Service shows that in 1960 visits to parks and related recreation areas in the fifty states totaled 259 million. A booming popularity in camping was reflected in a gain of 18% in "camper days" of those using tents and trailers, compared with a slight gain of 0.5% over the records of the previous year in use of day facilities. States reporting the heaviest park attendance were New York (34.4 million visits), California (24.4 million), Pennsylvania (22.7 million), Michigan (19.1 million), Ohio (18.6 million) and Oregon (10.9 million). Ninety-nine additional state parks and related recreation areas were acquired in 1960, increasing the total to 2,664. They have a combined area of approximately 5.6 million acres.

MARJORIE HURD, *Chairman, Conservation Committee*



WHITE MOUNTAIN NATIONAL FOREST

New Scenic Areas. At the banquet in celebration of the 50th Anniversary of the passage of the Weeks Law of 1911, held on October 6 at the Crawford House, Dr. Richard E. McArdle, Chief of the U.S. Forest Service, announced the creation of six scenic areas, totaling nearly 9,000 acres, in the W.M.N.F. These have been established by order of



Hamilton K. Pyles, Regional Forester of the Eastern Region, under authority granted by the Secretary of Agriculture. They are:

(1) Pinkham Notch Scenic Area, 5,600 acres, extending east and southeast from the summit of Mt. Washington across Pinkham Notch and up to Wildcat Ridge. Bounded, west of Route 16, on the north-west, north and northeast by the Carriage Road and Old Jackson Road, and on the southwest and south by the Davis Path and Glen Boulder Trail; east of Route 16, bounded on the southeast by Wildcat Ridge about as far east as Summit E, and on the northeast by the

Wildcat Recreation (ski) Area. Includes Tuckerman and Huntington Ravines, the Gulf of Slides, Lost Pond, Glen Ellis Falls, etc.

(2) Snyder Brook Scenic Area, 36 acres, a small tract along Snyder Brook on the north slope of Mt. Madison, including Tama, Salroc and Gordon Falls.

(3) Gibbs Brook Scenic Area, 900 acres, in Crawford Notch, extending from the road to Jefferson Notch and the Base Station, near the Crawford House, to the summit of Mt. Clinton (Pierce) and the ridge between Clinton and Jackson for about half its length. Includes most of the drainage of Gibbs Brook and Elephant Head Brook.

(4) Sawyer Pond Scenic Area, 1,130 acres, surrounding Sawyer Pond and extending from Green's Cliff on the southwest to Mt. Tremont and Owls Cliff on the northeast and east.

(5) Rocky Gorge Scenic Area, 70 acres, on the Kancamagus Highway, where the Swift River plunges over broken ledges into a gorge worn through solid rock. A footbridge leads across the gorge to picnic tables.

(6) Lafayette Brook Scenic Area, 990 acres, adjoining the Franconia Notch State Reservation on the north and extending from Route 3 to the summit of Mt. Lafayette. Includes all the drainage of Lafayette Brook east of Route 3, which (on the southeast) just takes in the Eagle Lakes and the Greenleaf Hut.

The scenic area designation assures the protection and enhancement of the scenic values under multiple-use management. Activities will be limited to maintaining the educational and recreational values of the areas, except where cultural operations or insect and disease control measures are necessary. Additional foot-trails and overlooks will be developed as warranted by demand. Interpretive signs will be erected so that the visitor may better understand and appreciate the near-natural conditions represented. Hunting and fishing in accordance with State laws will be permitted. Other recreation developments will be limited to trail-side shelters and other back-country camping and picnicking facilities.

Maps and brochures describing these six scenic areas may be obtained by writing to the Forest Supervisor, White Mountain National Forest, Laconia, New Hampshire.

NOMENCLATURE

Round Mountain becomes Mt. Weeks. The U.S. Board on Geographic Names advises that the name Mt. Weeks was approved by the Domestic Names Committee at its meeting on September 14. This name and description will be published in Decision List 6103 and will appear as follows:

Weeks, Mount: mountain with an elevation of about 3890 feet, in White Mountain National Forest; it is the northernmost mountain in the Pliny Range and is about 10 miles east-southeast of Lancaster; so named for Senator John W. Weeks (1860-1926), sponsor of the Weeks Act of 1911 under which the White Mountain Forest was established; Coös County, New Hampshire; 44°27'40" N., 71°22'55" W. Not: Round Mountain.

Puzzle Mountain, elevation 3133 feet, in the town of Newry, Maine, has an intriguing name. The study of the origin of names has many pitfalls and just why some mountains are designated as they are may remain an everlasting mystery.

The following information is offered as a possible clue to the naming of Puzzle Mountain.

"Puzzle Mountain" appears on the early atlases of Oxford County, but just when the name was first used I do not know. Through the kindness of Mrs. Oliver Gould of South Portland, Maine, I have an unpublished account of a climb to the top of Puzzle Mountain by members of the White Mountain Club of Portland, Maine, on August 27, 1878. According to Mr. Gould's record, the party left the home of Enoch Foster, who lived near North Newry in the Chase's Pasture area on the north side of the mountain. Mr. Gould wrote:

We could not decide whether the various peaks around were higher or lower but we concluded we didn't want any more pushing through the dead trees and so stopped there. Peak No. 1 bears N77.30W. The barometer, assuming no atmospheric changes or strains, shows that No. 1 is about 75 feet lower than No. 2. From No. 2, we noted a peak to the north that appeared to be higher still, though from No. 1 it appeared lower than No. 1. Perhaps it is from this difficulty of deciding which is the top that the name "Puzzle" is given.

A study of the Old Speck quadrangle shows that the summit of Puzzle Mountain is composed of three separate peaks, each two about 500 yards apart. The most westerly peak was used as a triangulation station by the United States Geological Survey and from the contours seems to be 3060 feet high. Another peak, to the northeast, is given an elevation of 3133 feet; while a third peak to the southeast, again from the contours, is apparently 3080 feet high. It is interesting to note that the White Mountain Club group measured a difference of 75 feet in the elevations of peaks No. 1 and No. 2. This figure compares quite favorably with the data from the U.S.G.S. maps sixty-seven years later.

Perhaps what prompted this note on the naming of Puzzle Mountain was a letter from Ivan L. Stowe of Bethel, Maine, who is a retired game warden and an old guide of this region. To quote from this letter:

Puzzle Mountain is a puzzle. If seen from Bear River, the peak nearest looks the highest; on the other side, which is the Ellis River side, the nearest peak looks the highest. There are three peaks and the only way to find out which is the highest is to go up there.

CHARLES B. FOBES

PERSONAL ITEMS

Guy Leslie Shorey. On April 17, 1961, Guy Shorey of Gorham, New Hampshire, died at the age of 79. He was known to mountaineers largely through his magnificent photographs of the White Mountain area, which many Appalachian Mountain Club members have seen on sale at the Club huts and elsewhere. Even today his picture, taken

nearly fifty years ago, of the headwall of the Great Gulf from the Six Husbands Trail stands out among photographs of the Northern Peaks. His fine color slides, taken more recently, of the mountains in all seasons have been shown by him to many New England audiences.

He was born in Gorham in 1881 and attended school there. He turned to photography as a career and gradually developed the studio, gift shop, and drug store in the center of Gorham, well known to visitors. He found time for public activities and served in the State Legislature, on charitable boards, and in various capacities in the town, district and State Rotary organization.

Mr. Shorey joined the Appalachian Mountain Club in 1905. As a young man, he covered most of the mountain area on foot, taking pictures as he went. He was also a member of many of the A.M.C. parties who laid out trails such as the Adams Slide, Buttress and Six Husbands trails in the Great Gulf. He accompanied Warren Hart, then Councillor of Improvements, on many trips, one of them to decide on the site for the Carter Notch Hut. Unhappily, lameness prevented climbing in his later years. Nevertheless, he continued his interest in mountain affairs, and was a warmly welcomed participant in mountain club gatherings, particularly in Randolph, where his daughter, Mrs. John Boothman, wife of the owner of the Mount Crescent House, has lived for some years.

His keen desire to see the region preserved unspoiled for future generations of mountaineers, his far-sighted wisdom, and his detailed knowledge of the area made him for fifteen years a particularly useful member of the State Planning and Development Commission during its formative period. On this body he ably represented the northern part of the State in efforts to ensure sound long-term planning for the future of New Hampshire.

R. AMMI CUTTER

Paul Doherty, formerly New Hampshire Fish and Game Department Conservation Officer in charge of the Berlin-Gorham-Shelburne area, has been appointed District Chief for the entire northern part of New Hampshire, from the Quebec line down to Lisbon, Franconia and part of Lincoln. Practically all the highest mountains are included in his charge.

William Turner has taken over Paul Doherty's former territory.

MONTALBANIANA

Bear Hunter. My real life as a hunter began in 1831, when I was seventeen years old. My parents having died when I was two years old, I was given to a man to be brought up, but he and I failed to agree and I became restless and determined to seize the first opportunity for gaining my liberty. Well, it came through an Indian chief. I went to a Vermont town to see a horse-race, and there I met a Mohawk Indian chief named Wanawah, who had come to the race to sell baskets and skins. When he asked me to return with him I wasn't long in making up my mind to do so. Wanawah was a grand noble fellow, who ruled the remnants of the Mohawk tribe. He had received a good English

education, and he became not only my friend but my instructor, teaching me all manner of woodcraft.

I lived two years with the Indians, and though it was pretty rough sometimes, they were the happiest years I had ever spent, and I thoroughly enjoyed the hunting.

They were all very anxious to teach the paleface how to hunt, and right well do I remember our first expedition after bears. We turned out, a party of twenty braves and squaws, the latter going along to tend the dogs and bring back the game. The chief's wife and two daughters were in the party, and I was ambitious to stand high in their opinion. Well, when we came up with the dogs we found them barking furiously at a hole in a big ledge, but they kept at a safe distance and we couldn't get them even to the mouth of it. The Indians began to guy each other and dare somebody to go into the hole.

Finally I said I was going in, but the chief tried to dissuade me. I was determined, however, and in a jiffy I had peeled a white birch and rolled [the bark] into shape for a torch. I then tied a rope around one of my legs, and told the braves to yank me out if I fired my gun. So, feeling a little shaky, I must confess, I crawled into the hole, with a gun in one hand and a torch in the other; and it was a crawl, indeed, for the place wasn't only about big enough for a sheep to get into. After I had crept along several feet the space began to widen, and at length opened into quite a spacious chamber. Here I heard a rustle, followed by a low, chewed-up growl. I flashed my torch in the direction of the sound and saw the long broadside of a terribly big animal. My movement brought him around toward me, with all his ugly white teeth showing, and a growl that fairly made the cave quiver. I tell you what, it is a mighty different thing to visit a bear in his own lair than to look at one in a cage! Well, I dropped my torch and fired in the direction of the bear. The next thing I knew, I was being hauled out of the cave at such a rate of speed that my garments paid heavy toll in the shape of buttons, buckles, and cloth. They didn't have much trouble in hauling me out, for the concussion knocked me out as straight as an eel. The bear had fallen stone dead right where he stood, the ball having entered just under the eye, and a lucky shot it was for me.

Allen Thompson, in *Among the Clouds*, 1887.

LETTERS FROM OUR READERS

"The Longfellow Mountains of Maine". Having agreed heartily with the conclusions of Mr. Underhill's discussion of this subject as found in APPALACHIA XXXIII, pp. 115-120, I am impelled to send you the following remarks in the spirit of the *New Yorker's* Department of Amplification.

A. E. Housman, author of *A Shropshire Lad*, in one of his earlier exercises in light verse, set out on an apparent collaboration with Longfellow, then perhaps at the zenith of his fame but already gone from the world. The resulting poem, with each two lines of Longfellow interlarded with a line of Housman, is another and perhaps less known example of the parodies of "Excelsior". There is no title:

The shades of night were falling fast,
And the rain was falling faster,
When through an Alpine village passed
An Alpine village pastor:
A youth who bore mid snow and ice
A bird that wouldn't chirrup,
And a banner with the strange device—
'Mrs. Winslow's soothing syrup'.

'Beware the pass', the old man said,
'My bold, my desperate fellah;
Dark lowers the tempest overhead,
And you'll want your umberella;
And the roaring torrent is deep and wide—
You may hear how loud it washes.'
But still that clarion voice replied:
'I've got my old galoshes.'

'Oh, stay', the maiden said, 'and rest
(For the wind blows from the nor'ward)
Thy weary head upon my breast—
And please don't think I'm forward.'
A tear stood in his bright blue eye,
And he gladly would have tarried;
But still he answered with a sigh:
'Unhappily I'm married.'

(Reprinted with the permission of Charles Scribner's Sons from MY BROTHER, A. E. HOUSMAN by Laurence Housman. Copyright 1937, 1938 Laurence Housman.)

Thus Longfellow's connection with mountains is perhaps even more attenuated (by 50%) in this revision of the famous work, and a pessimist might even foresee international complications arising from careless nomenclature. But one fears that the Legislature of the State of Maine, to say nothing of the Chamber of Commerce, will pay scant heed to these possibilities. Would an excelsior vote among the A.M.C. membership perhaps impress them?

WALTER H. STOCKMAYER

BOOK REVIEWS

The Ascent of Dhaulagiri. By Max Eiselin. New York: Oxford University Press, 1961. 159 pages, 29 pages of illustrations, including 5 in color, 2 maps. \$5.75.

Dhaulagiri (8222 m., 26,795 ft.) was, at the beginning of 1960, the highest unclimbed mountain in the world and the last but one of the unconquered 8000ers. From 1950 on it had been attempted without success by no fewer than seven different expeditions—Swiss, French, German, Austrian and Argentinian—and had acquired a reputation for extraordinary difficulty. In 1960 it was mastered by a second Swiss expedition, using a comparatively new route. Six men, including two Sherpas, reached the summit on May 13, and ten days later two other members of the same party repeated the performance. A unique feature of the expedition was the use of a small airplane for the transport of men, equipment and supplies to the base camp—the first time such a method had been tried in the Himalaya. The arrangement had both advantages and disadvantages: it saved an enormous amount of time and labor, but deprived the climbers of the usual opportunity for slow acclimatization, with some bad results. There were difficulties connected with the operation of the plane (on one occasion the engine blew a cylinder-head and three weeks were required for its replacement), and eventually the plane crashed shortly after a take-off (fortunately without serious injury to the occupants), but by that time most of its work had been done.

So much for the bare outline of the story. Now what about the manner of its telling? Frankly, this is a dull book. It is dull, not because it is (happily) short on the tales of fatal and near-fatal accidents which the general public today demands of mountaineering books, but because it fails to convey the atmosphere of a great Himalayan climb or to make vivid to other knowledgeable mountaineers the peculiar technical difficulties of the ascent and the means used to overcome them. Dhaulagiri was supposed to be a pretty tough mountain: no realization of this is brought home to us.

For the book's failure to arouse interest there are, I think, two explanations, one minor and one major. The minor trouble lies in the style of the author. He is all too prone to weary us with trivial and unnecessary factual detail—a fault, to be sure, of far too many excellent climbers who try their hands at a bit of writing. When we do get a passage about thoughts and feelings it is likely to be nothing better than an itemized recounting, at paragraph length, of conjectures made and anxieties endured in regard to some situation at the time unknown—all of which it becomes pointless to relate in detail once the facts have come to light. The book reads in the main like a slightly modified transcription of Eiselin's private diary, often bound far too much to the time of writing and to the personal preoccupations of the writer to be of sufficient general interest.

The second and major shortcoming is due to the circumstances of Eiselin's own position. As leader of the expedition he had the unfortunate responsibility of supervising the transport arrangements and, in particular, the activity and servicing of the airplane. Due to the

troubles noted, this kept him pretty much out of the actual climbing, so that he had almost no personal knowledge of how it went on. While one must sympathize with his self-denial, and admire the manner in which he resigned himself to a secondary and humdrum role, one may feel that under the circumstances someone else should have been called in, as co-author, to describe the progress of the climb itself. (Incorporated, to be sure, are two or three brief reports by others on certain phases of the climb, but these are hardly enough.) In fact, even had Eiselin participated to a much greater extent in the actual work on the mountain, it would have quickened our interest to hear directly from one or more of the others as well, since reactions to the tremendous experience of Himalayan climbing are necessarily so individual and varied. The eminent success of such a book as *K2, The Savage Mountain*, demonstrates the marked virtues of a distributed authorship; in my opinion, certain other accounts of exalted climbs (here I mention no names) would have done well to adopt the same method.

The price of the book seems high for so slender a volume, well but not lavishly illustrated. (A couple of the colored plates are very beautiful.) However, since this is the only account in English of the notable Dhaulagiri climb which we are likely to get, many will undoubtedly want it.

ROBERT L. M. UNDERHILL

The Compleat Traveller in Great Britain. By Albert B. Brushaber. New York: Vantage Press, 1960. 268 pages, illustrated, end-paper map. \$3.95.

To review this book from my side of the Atlantic calls for some exercise of the imagination, for it is clearly addressed to American not to British readers, and to do justice to it I should properly put myself in the position of a potential American visitor to Britain. There are, of course, difficulties in doing so, the least of them being those arising from the different usages of our common language, but for a starter what am I to make of the title? To me, it implies a combination of comprehensive coverage, technical authority, and literary grace springing from a lifetime of loving interest worthy to rank alongside Isaak Walton's piscatorial treatise, and anyone expecting as much will be disappointed. But the author sets about disarming criticism on this score in his Foreword, in which he expounds his approach as a curious, alert, and sympathetic traveler and extols the rewards which fall to those who would make their own way in a similarly enterprising spirit.

This is a highly personal account of a motor tour of England and Scotland (Wales is so lightly touched as to rate no more than two pages) lasting one month, in the course of which the author traveled from London to Inverness and back. Everywhere the author's curiosity and imagination are stimulated by local historical, cultural and sociological associations which tend to dominate the text to the exclusion of narrative or descriptive matter. His interests and sympathies are wide and generous, but one could have wished that a member of the A.M.C. would reveal a rather livelier response to the mountain areas of Britain, a keener esthetic response to, say, the splendor of Durham Cathedral, and a rather higher standard of accuracy in many places.

Ben Nevis was not, apparently, worth sitting out a rainy day in Fort William (where the Grand is *not* the best hotel); Glen Coe gets a mention for the massacre and a gloomy and fatuous quotation from Dickens (of all people), but no reaction to the delights of its tributary glens or to the splendor of its ridges and crags and the challenge they offer to the climber; the Lake District gets some mention, but it is 35 miles square, not 35 square miles, and over 10 percent, not one half of one percent, of the area of New Hampshire; Wales is barely touched and the Peak District is ignored altogether. The text is marred by many unnecessary inaccuracies in detail—for example, Fort Augustine is in Florida and not in Scotland; the Coronation Scot does not and never did travel overnight from King's Cross to Edinburgh via Darlington or anywhere else; a Consol is a Government security and not a motor car—which do nothing to enhance confidence in the validity of the author's many potted histories and sociological dicta.

On reflection, perhaps the very character of the book, its very definite virtues and limitations, have eased my task of reviewing it for American readers. Taken for what it is, and not for what its title and the publisher's blurb imply, it is an entertaining account of one visitor's reaction to the contemporary scene in Britain, what shaped it, and what lies behind it, and it is a stimulating example of the rewards to be found in an unguided tour. Many facets of the country's history are illuminated, often vividly; the author's reflections are colorful and romantic, rather than scholarly, and communicate his delight in what he saw. Its geographical range is, however, limited and excludes large areas of special character; unhappily the omissions (e.g., the northwest Highlands and Islands, North and South Wales, the Peak District, the West Country) include those areas of most interest to mountaineers.

F. SOLARI

Space Below My Feet. By Gwen Moffat. Boston: Houghton Mifflin Co., 1961. 302 pages, 8 pages of photographs. \$5.00.

For many readers the overtones will doubtless overwhelm the fundamental note sounded by this book—which is a pity, as the fundamental is well worth attentive hearing. Let's dispose of the overtones first.

Overtone I. Miss Moffat (so-called on the jacket, but that wasn't her name then, and now she isn't "Miss") having, in her teens, become an Army truck driver, grew desperate with boredom when the war came to a close. As luck would have it, she met a man (see Overtone II) who talked climbing to her, whereupon she took to the road and the hills, at first with him, then with others. Follows, in this vein, a series of fascinating adventures which improve on any tale by Jack Kerouac—tramping and hitchhiking, sleeping in barns, tents or just the plain open air, picking up and relinquishing casual jobs of all sorts or just living off the country on nothing at all, indulging in escapades that will start a smile or, in some quarters, maybe at times a frown (and indeed, it would be interesting to learn at firsthand the comments of other persons affected on some of these occasions!). It is an impressive chronicle of courage, self-reliance, resourcefulness and utter contempt for that security which, we are often told nowadays, is the chief aim of life.

Overtone II. A constant procession of men passes through these pages. Miss Moffat is seldom alone in her wanderings, and practically never alone with a companion of her own sex. Some man is always at hand, or promptly responsive at call, to introduce her to a new aspect of the Romany life, or to a new phase or region of climbing. (Here, it would seem, there is a great advantage in being a woman: what man, even in Europe, would be lucky enough to pick up a succession of a dozen or more attractive *and* competent girls to climb with him duo all over Britain and the Alps?) But of these situations, so rich in emotional possibilities, we are told for the most part only the barest outward facts. Early in the tale, to be sure, there is a confession or two of being more or less briefly in love; later any such admission (if in order) is rigidly suppressed. Somewhere along the line, without warning to the reader, Miss Moffat picks up a husband (named Moffat); presently he drops quietly out of the picture—leaving her however a daughter, who does *not* drop out—and eventually is dismissed for good in one brief sentence recording a divorce before a second marriage. The jacket photograph shows a healthy, pleasant-looking young extrovert, and the text abundantly bears out this suggestion. Anyone who picks up this book for its sex will be wasting his time.

Now for the fundamental note. This is a book about climbing—primarily about rock climbing, extremely difficult rock climbing, but also about snow and ice climbing in the Alps and in winter in the British Isles. (Miss Moffat is the first woman to have secured a professional guide's license in Britain.) Many of the climbing descriptions are superb. Miss Moffat is no adept at introspection—in her climbing any more than in her personal relationships; she has little of note to say about *why* she climbs, but she is often splendid in expressing how she feels when doing it. Experienced rock climbers will time and again relive vibrantly with her some tense situation or other, some exacting and exultant movement. There are no accounts of major accidents, none of hairbreadth escapes, such as the public expects mountaineers to provide nowadays; just these vivid evocations of the joy which a dedicated climber experiences in feeling firm, steep rock beneath his feet and hands, and in swinging his body strongly and smoothly up from one set of holds to another. This is what the book should be read for.

ROBERT L. M. UNDERHILL

The Lightning Book. By Peter E. Viemeister. Garden City, N. Y.: Doubleday & Co., 1961. 316 pages, 53 photographs, numerous diagrams. \$4.50.

This book, written by an engineer, provides interesting and informative reading concerning one of the most spectacular manifestations of nature. The author explains the basic electrical and meteorological phenomena in nontechnical language, with numerous explanatory diagrams. The photographs of natural and artificial lightning are especially striking. Although not written with specific reference to lightning in the mountains, the book contains much of interest to climbers. The extensive bibliography ranges from the Bible to 1960 technical papers.

CHARLES KINGSLEY, JR.

King of the Mountain Men. The Life of Jim Bridger. By Gene Caesar. New York: E. P. Dutton Co., Inc., 1961. 317 pages, 12 halftones, 4 maps. \$4.95.

Jim Bridger typifies the "mountain men", the fur-trappers and traders in the Rocky Mountain region who as pioneer explorers, Indian-fighters, and guides became legendary figures of the 19th century West. This is a readable biography, which should appeal to younger members and to adults who relish such volumes as Bernard DeVoto's *Across the Wide Missouri*.

MARGARET CURRIER

Nature's Year, The Seasons of Cape Cod. By John Hay. New York: Doubleday & Co., 1961. Illustrated by David Grose. 199 pp., 12 woodcuts and frontispiece. \$4.50.

A discussion of life and nature on Cape Cod, handled in monthly units, with sub-chapters in each. The woodcuts indicate the imaginative approach at which the author aims in his treatment. A book directed to those who wish to be more aware of the human and natural aspects of the area.

ELIZABETH S. BELCHER

Wilderness, the Discovery of a Continent of Wonder. By Rutherford Platt. Illustrated by Frances Ellis. New York: Dodd, Mead & Co., 1961. 229 pp., index. \$6.00.

An historical account of the discovery of the different sections of North America. The treatment goes beyond the history-book listing of famed explorers to the inclusion of many stories, perhaps known, but not heretofore integrated in time and area.

The translations of original reports, the excellent discussion of wilderness areas as they originally were, the easy style of writing make this much more than an historical text. Liberal sprinklings of part-page black-and-white drawings by Frances Ellis add to the delight and knowledge this book imparts. A book to know.

ELIZABETH S. BELCHER

The Geology of Baxter State Park and Mount Katahdin. By Dabney W. Caldwell. Augusta, Maine: Maine Geological Survey, Department of Economic Development, 1960. 54 pages, 18 photographs, one fold-in map. 75 cents.

The second in a series of geologic reports devoted to the State parks in Maine. For the most part text and photos are clear and easy to understand. (Fig. 12, a vertical airphoto, is an exception: it is so oriented that the shadows fall from right to left, instead of toward the viewer, making it difficult to distinguish valleys from summits.) The book as a whole is less coherent than one might wish, from the point of view of the newcomer to the region; but the individual discussions of phenomena are clear and careful and will fill out the picture in worthwhile fashion for those who already have a fairly good general notion of this somewhat overwhelming landscape.

WILL F. THOMPSON

Connecticut Walk Book. Fifth Edition, July 1961. 84 pages, 31 maps. Connecticut Forest and Park Association, 322 North Main Street, Wallingford, Conn. \$2.75 (Connecticut residents add 10¢ tax).

The first complete revision since 1953 of the official guide to the Connecticut system of Blue Trails. Compiled by Shelton B. Hicock and the Trails Committee of the Connecticut Forest and Park Association, largely from information furnished by local volunteer trails section chairmen.

The same size and with the familiar blue cover of earlier editions, the present work includes many new trails, notably the Sleeping Giant system, shows relocations, and deletes abandoned trails. Mileages are cumulative throughout. A section of earlier editions, "Walks Around Connecticut Towns and Cities", has been eliminated in order to include only marked trails. Seymour Smith has redrawn many of the maps.

This book is a must for the Connecticut tramp, whether veteran or beginner.

MARY B. SAWERS

A.M.C. Maine Mountain Guide. Published by the Appalachian Mountain Club, 5 Joy Street, Boston 8, Mass., 1961. 190 pages. 5 one-page maps, two folded two-color maps, two separate cover-pocket maps of three colors. \$3.50 (\$3 for members).

For the first time we have here one convenient, concise, clear and well-written guidebook, small and lightweight, which describes routes on all Maine mountains, including those in several areas which have never before been covered by any guidebook at all. Sales of this guidebook had been estimated, before publication, at 1000 copies in the first year. It outsold its first 1000 in a few brief weeks.

MIRIAM UNDERHILL

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